1. Introduction

The Royal Society of Chemistry (RSC) can award five professional designations: Chartered Chemist (CChem), Chartered Scientist (CSci), Chartered Science Teacher (CSciTeach), Registered Scientist (RSci) and Registered Science Technician (RSciTech). We have been granted the license by the Science Council to award CSci, CSciTeach, RSci and RSciTech.

This guide contains everything you need to know to become a Registered Science Technician.

RSciTech entry standards are based on the following:
- knowledge and understanding of chemical topics;
- professional competence and commitment to professional ethics; and
- professional conduct and continuing professional development (CPD).

Work-Based Awards

The registers are work-based professional awards which provide recognition for your contribution to the chemical sciences beyond qualifications. Learning does not stop at the last exam you took, and you are continually developing throughout your career. These awards provide peer-reviewed recognition for all the other skills which make you a successful contributor at work.

The registers are open to all those who can demonstrate they have undertaken appropriate work-based chemical science learning, regardless of their academic background.

You must submit a completed application form along with copies of your qualification certificates and your current curriculum vitae (CV).

What if I don’t have the right experience?
If we feel you have the appropriate experience we may recommend that you register for Registered Scientist status.

More information can be found online at the Science Council: http://www.professionalregisters.org
And on our website http://www.rsc.li/registers.
2. What is a Registered Science Technician (RSciTech)?

The RSciTech register is owned by the Science Council and is a professional award providing recognition for those working in technical scientist roles. The RSciTech designation provides recognition in its own right but can form part of professional development towards becoming a Registered Scientist (RSci).

Gaining RSciTech will prove that you have:

- demonstrated your professionalism to employers, colleagues and clients;
- transferable skills that allow you to work across different science sectors;
- built on your academic achievements and developed professional skills in a work environment;
- gained knowledge and awareness of your chosen area of the sciences;
- developed strong scientific skills and are committed to improving them;
- shown personal and professional integrity; and
- committed to developing your career, as well as advancing excellence in the sciences.

3. Eligibility requirements

To be eligible, you will be currently working in a chemical science based role.

Applications to become a Registered Science Technician through the Royal Society of Chemistry are open to affiliate members who demonstrate, through reflective statements, that they satisfy the required competences set out by the Science Council (see Section 5).

You will be working to or qualified to at least level 3 of the Qualification and Credit Framework QCF.

- Examples of qualifications at this level include AS and A-levels, advanced apprenticeships, Scottish and National Vocational Qualifications at level 3 and Scottish Highers.

I don't have those types of qualifications, can I still become RSciTech?

Registered Science Technician status is also available to scientists working in a chemical science environment who have considerable experience in the workplace, but do not hold formal chemical science qualifications.

If you do not have qualifications at QCF level 3, then your experience gathered through your role is used to determine if you are working at the appropriate level. Therefore it is important to include in your CV as much information as you can about your current and previous roles and responsibilities, including any achievements.

A quick check tool from the Science Council is available online to help you determine if you are eligible, based on your education level and experience: http://www.professionalregisters.org/isthisforme

4. The application process and role of the supporter

Step 1
First, you become an Associate or Affiliate member of the RSC.

Step 2
Identify someone to be your supporter.

Step 3
Work with your supporter to complete the application form. You will complete the competence boxes, in which you describe how you have met each competence criteria. Your supporter will write a supportive statement. Make sure you sign the form (electronic signatures are accepted), and tick the declaration.

The form is available to download from the RSC website http://www.rsc.org/careers/cpd/practising-scientists/

Step 4
Email the completed form and your CV to the accreditation and qualifications team at registers@rsc.org. You may be asked for more information at this stage if we feel that your application is not yet of the required standard.

Step 5
Your application is reviewed by a panel of experienced members of the Royal Society of Chemistry (our Admissions Committee). Members of this committee come from many different disciplines in the chemical science sector, and are from both academia and industry.

Step 6
We will inform you of the decision. If successful, you will be presented with a certificate and will be permitted to use the letters RSciTech after your name.

If you are a current applicant or just considering RSciTech and would like more information or support, please contact us.

Email: registers@rsc.org
Phone: 01223 432141
The form
The form lists the competences set out by the Science Council that must be met for the award of RSciTech and you should provide examples of how your day-to-day work and training satisfies these requirements. One in-depth example of how you meet each particular competency as detailed on the form, is required.

It is helpful to consider the STAR format for providing answers;

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<thead>
<tr>
<th>S</th>
<th>Set the situation</th>
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<tbody>
<tr>
<td>T</td>
<td>Describe the task and issue that you addressed</td>
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<tr>
<td>A</td>
<td>Describe the action you took</td>
</tr>
<tr>
<td>R</td>
<td>Tell us what the result of your actions was</td>
</tr>
</tbody>
</table>

It is recommended that you use the same example for no more than 3 competences. However, you should ensure you are clear on how each example applies to the specific competence you are addressing.

The role of your supporter
Your supporter should be a senior colleague that is very familiar with your work. This person is usually your line manager. The role of the supporter is to provide guidance to the applicant in completing the form and to confirm that the applicant is meeting or exceeding the competences.

It is vital that the supporter provides a specific comment in support of each of the five competence areas before the completed application is returned to the RSC. They must also sign the declaration.

Guidance is available at any stage of the process, to both applicants and supporters, from a member of our Accreditation and Qualifications team.

Fees: the application fee for registration is £15, and there is an annual fee of £15 payable to maintain RSciTech, which will be collected together with your membership subscription fees.

Email: registers@rsc.org
Phone: 01223 432141

5. The competences

The 15 competences which are set out by the Science Council and must be satisfied for the award of RSciTech are split into five categories as follows.

A: Application of knowledge and understanding:
Identify and use relevant scientific understanding, methods and skills to complete tasks and address well defined problems
A1: apply knowledge of underlying concepts and principles associated with area of work
A2: review and select appropriate scientific techniques, procedures and methods to undertake tasks
A3: interpret and evaluate data and make sound judgements in relation to scientific concepts

B: Personal responsibility:
Exercise personal responsibility in planning and implementing tasks according to prescribed protocols
B1: work consistently and effectively with minimal supervision to appropriate standards and protocols
B2: manage and apply safe working practices
B3: accept responsibility for the quality of work of self and others
B4: take responsibility for completing tasks and procedures as well as using judgement within defined parameters

C: Interpersonal skills:
Demonstrate effective communication and interpersonal skills
C1: demonstrate effective and appropriate communication skills
C2: demonstrate interpersonal and behavioural skills
C3: demonstrate an ability to work effectively with others

D: Professional practice:
Apply appropriate theoretical and practical methods according to protocol
D1: recognise problems and apply appropriate scientific methods to identify causes and achieve solutions
D2: identify, organise and use resources effectively to complete tasks
D3: participate in continuous performance improvement

E: Professional standards:
Demonstrate a personal commitment to professional standards
E1: comply with relevant codes of conduct and practice
E2: maintain and enhance competence in own area of practice within structured and managed environment
6. What to include for your competences

For each competence statement, you need to write clear examples of the role that you play or the contribution that you make to a particular task or activity. To provide your examples with sufficient depth, it might be useful to explain what you did, how you went about it and why you did it. Your examples should be from within the last 3 years.

The following examples are provided by the Science Council

A: Application of knowledge and understanding:
Identify and use relevant scientific understanding, methods and skills to complete tasks and address well defined problems

A1: Apply knowledge of underlying concepts and principles associated with area of work

Explain the key reasons for undertaking your work. Examples include:
- working in a particular subject discipline in an applied science area. Please name and describe in technical detail how you use the main components, elements, materials, or designs involved in your work and why you are carrying it out;
- carrying out a particular procedure or process. You should explain in technical detail why you are using that procedure or process and why it is relevant to that specific work; and
- using a particular experimental model or computer programme. Explain why you are using that specific model or programme, describing in technical detail how you use it and what the results might contribute to.

A2: Review and select appropriate scientific techniques, procedures and methods to undertake tasks

Explain the underlying reasons for undertaking tasks and why a particular procedure, technique, or process is appropriate. It is important to demonstrate that you appreciate why you are using a particular technique, even if you do not have to choose precisely which techniques you use. Examples include:
- the principles behind the activity that you are undertaking and any associated technology;
- the reasons behind the choice of method used to carry out the activity and the criteria which form the basis of what you need to achieve the end result.

A3: Interpret and evaluate data and make sound judgements in relation to scientific concepts

Explain how you recognise when your activity appears to have been successfully undertaken, or not. Describe what your data, observations, or measurements mean as related to the underlying principles. Describe how you present information in an appropriate manner in order to explain your judgement. Examples include where you have stated that the activity has worked well or not.
- If successful, your example should describe the rationale or scientific basis behind your conclusion and why the data, observations, or measurements support your conclusions.
- If not, give reasons as to why the activity failed, and what you proposed to do next time to address this. Your example should include how you explained the results of the activity. This could include comparing it with results from a number of different activities.

B: Personal responsibility:
Exercise personal responsibility in planning and implementing tasks according to prescribed protocols

B1: Work consistently and effectively with minimal supervision to appropriate standards and protocols

Demonstrate how you carry out work with minimal input from your supervisor for key tasks, experiments or procedures associated with your role. Tell us how you complete them to the appropriate standards and time frame.
- Your example should illustrate how, after you discussed the work with your supervisor and established a time frame, you then carried out the work with little or no further input.

B2: Manage and apply safe working practices

Explain the safe working practices applicable to your area of work and describe how you follow them. Examples include:
- risk assessments associated with your work;
- relevant Health and Safety regulations, e.g. COSHH, Noise, Manual Handling;
- relevant Home Office Licences;
- safety training courses you have successfully completed for your laboratory role;
- any monitoring of safety within your work, e.g. for radioactivity, chemical exposure; and
- safety equipment and control.

B3: Accept responsibility for the quality of work of self and others

Describe how you accept responsibility for the quality of the work that you undertake and that of others. You can include instances where an activity does not work in the way that you expect. Examples include how you:
- ensure that an activity is carried out to the agreed standard or protocol (e.g. good laboratory, workshop or design practice). You must provide evidence for this in your answer;
- understand when something might not have been carried out correctly, and what impact it could have on the quality and reliability of the outcome; and
- differentiate between ‘good experimental data’ and ‘bad experimental data’ and the reasons why this might have occurred.
B4: Take responsibility for completing tasks and procedures as well as using judgement within defined parameters
Provide examples of how you accept responsibility for completing a task in the required time and the steps you take if you are unable to complete the

task on time. Examples include where:
  • an experiment or process failed;
  • a critical piece of equipment or tooling failed;
  • a critical reagent or material running out; and
  • a staff absence making it impossible to complete on time.

Your example should include how you judged when you communicated this 'negative news' to others. You should also describe how you overcame the
problems and mitigated impact on the agreed time lines.

C: Interpersonal skills:
Demonstrate effective communication and interpersonal skills

C1: Demonstrate effective and appropriate communication skills
Demonstrate that you communicate well through using appropriate oral, written and electronic means. Examples include:
  • how you discuss and agree objectives with your supervisor;
  • how you discuss and agree objectives in team meetings;
  • how you describe or present your work and other relevant information about the lab, workshop, or section work (e.g. safety updates, method updates) to your supervisor or colleagues;
  • how you prepare written reports on your work;
  • how you train students or staff in the use of equipment or processes;
  • how you demonstrate the processes or systems; and
  • the part that you play in induction of new staff or students.

C2: Demonstrate interpersonal and behavioural skills
Demonstrate skills that enhance your ability to interact with colleagues in 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. Your example should also describe how you ensure your method of interaction is appropriate for:
  • interacting with researchers, technicians or other members of staff;
  • interacting with students face to face; and
  • interacting with external colleagues (such as suppliers or couriers).

C3: Demonstrate an ability to work effectively with others
This means 'team work', which can be in a large team or on a 1:1 basis. Illustrate how you worked collectively with others, what your role was, and what the outcome was. Examples include:
  • how you work with researchers, technicians or other members of staff;
  • how you work with students face to face; and
  • how you work as part of a team, working group, or committee.

D: Professional practice:
Apply appropriate theoretical and practical methods according to protocol

D1: Recognise problems and apply appropriate scientific methods to identify causes and achieve solutions
This means you need to demonstrate your understanding of the underlying principles of an activity and how, because of this understanding, you are then able to modify a process, programme, material, or machine sequence in the light of 'potential failure' to allow it to be 'successful'. Include in your understanding why this might have 'failed' and how you identified how you would alter your approach to address the problem. (Note: this does not mean altering a methodology that is sound when an unexpected result is achieved, only when the proper controls indicate the method is not working correctly.)

D2: Identify, organise and use resources effectively to complete tasks
Provide examples of where you have chosen a method, procedure, programme, equipment, or set of materials because it was the most appropriate one to use. Your example should describe how you planned and organised your resources to complete the task, and also how you reviewed choices - why the one you selected was the best compared to others that are available. This might include:
  • cost effectiveness;
  • time taken;
  • IT considerations; and
  • machine tool time.

D3: Participate in continuous performance improvement
Give an example, which shows how you make yourself aware of progress in your subject area, and seek ways of improving the efficiency of your work. It should describe how you discuss with your supervisor the strategy for achieving this.
This could include new and improved methods, new ways to increase throughput, or ways to increase cost-effectiveness. Examples include:
  • looking for cheaper resources;
  • buying equipment or consumables;
  • reviewing procedures; and
  • taking part in staff reviews.
**E: Professional standards:**

**Demonstrate a personal commitment to professional standards**

E1: Comply with relevant codes of conduct and practice
Describe how you manage your work within all relevant legislative, regulatory and local requirements, frameworks such as Health and Safety Legislation, Home Office Regulations, Good Laboratory Practice (GLP), local Codes of Practice, etc.
Tell us:
- how you comply with the Royal Society of Chemistry’s code of conduct;
- what other codes of conduct do you adhere to in the workplace; and
- give a brief explanation of why it is important that you follow these codes of conduct.

E2: Maintain and enhance competence in own area of practice within structured and managed environment
This means that you undertake activities to enhance your competence in your own area of practice i.e. Continuing Professional Development (CPD).
This includes:
- reading about your subject area to improve your own competence in it;
- achieving any qualifications relevant to your role;
- any training you have been on;
- any outreach activities you have been involved with; and
- any mentoring you have done of others such as new starters and helping to teach others about new procedures etc.

Note that you will comply with the Science Council CPD Standards for Registrants and you will be asked by the Royal Society of Chemistry from time to time to demonstrate evidence that you meet the standards via the CPD revalidation return.