

Achieving Chartered Chemist status

Getting started

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1. INTRODUCTION

The award of Chartered Chemist (CChem) status is a peer reviewed process providing recognition of your skills, knowledge and professionalism within the chemical sciences. The award demonstrates to the wider community that you have:

- built on your academic achievements and developed professional skills
- gained in-depth knowledge and critical awareness of your chosen area of the sciences
- developed strong scientific and transferable skills and are committed to improving them and developing your career
- made a critical contribution to the success of your organisation, business or institution
- shown personal and professional integrity
- made a contribution to the profession and are committed to advancing excellence in the sciences.

Chartered Chemists are expected to undertake lifelong learning in the form of professional development to ensure their knowledge and skills are kept up to date. As a CChem holder you may be asked to share your continuous professional development record with us.

2. REGISTERING TO APPLY – ELIGIBILITY FOR CHARTERED CHEMIST

In order to be eligible to register to apply for the award of CChem you:

- Must be MRSC or FRSC
- Must be able to show how you have acquired a Master's level in chemical science and professional skills and knowledge. This can be done by telling us about your experience in the Equivalence form or by holding a Royal Society of Chemistry Master's level accredited degree.
- Must demonstrate that you use advanced skills and knowledge in the chemical sciences (for example at a postgraduate level) in your current role.
- Must be committed to continuing professional development.

Not currently in work – You can register to apply for CChem if you have recently stopped working within the last six months. You will need to be able to provide evidence that you fulfil the professional attributes from the last two years from work you have undertaken.

Postgraduate study – You can register to apply for CChem if you are currently studying for a PhD. You must hold full Member status, MRSC and be able to provide evidence of fulfilling the professional attributes from your research.

2.1 Information you need to register to apply:

- Eligibility section completed
- Equivalence section completed if needed
- Up-to-date CV

2.2 Eligibility: Knowledge requirements – accredited degree

The level of specialist knowledge required for CChem is set at that of a Royal Society of Chemistry accredited Master's level degree. You can fulfil the requirements for CChem by holding a Royal Society of Chemistry accredited Master's level degree. If you do not have an accredited degree, you can show that you have reached the required level through other study or work experience.

2.3 Equivalence: Knowledge requirements – other experience and demonstrating equivalence

If you do not hold a Royal Society of Chemistry accredited Master's degree, then you will need to show us how you have reached a similar level of skills and understanding to that contained in an accredited Master's degree. A Royal Society of Chemistry accredited degree requires students to attain a breadth and depth of knowledge of chemistry.

- Breadth can be demonstrated either by academic achievement in a chemical science field or by on the job learning; for example if you hold a BSc in Forensic Science you could detail the modules with chemistry content, or give some detail about a final year chemical science project. You could also demonstrate this by work experience, for example you could detail how you have learnt to synthesise target compounds by learning from your peers and attending training courses.
- Depth in a specialist area can be demonstrated by further study, such as a PhD, a non-accredited Master's in the chemical sciences, or a final year project in the chemical sciences. You can also show how you have developed depth of specialist knowledge through on the job learning.
For example, explain how you have developed from a routine analyst through to a team leader by learning about the techniques available to you and becoming an expert in a particular field.

2.4 Equivalence: Professional skills requirement

A Royal Society of Chemistry accredited Master's degree also covers development of professional skills. If you don't hold an accredited Master's degree then in addition to evidencing the breadth and depth requirement above, you also need to show how you:

- Deal with complex issues and make sound judgement in the absence of complete data. This can be evidenced with a discrete example of where you have had to do this, or can be combined with the other qualities below when describing a project, some of the hurdles and how you overcame them.
- Plan and carry out tasks independently and assess significance of outcomes. You need to show us how you work with high levels of autonomy and responsibility in your role. You will be able to manage your work load and take the lead on projects or work that you are involved with.
- Are continuing to advance your knowledge and understanding of the chemical sciences in your area. This can be demonstrated by mentioning how you undertake CPD.

2.5 The routes to CChem

When registering to apply, you will need to indicate which route you wish to achieve CChem status by.

Professional Development Programme (PDP)

This route is for members who have been working for less than six years in a chemical sciences related role using chemical science knowledge at or above the Master's level.

This is a two year programme where you will submit a plan of action at six months, a progress report at twelve months and the final report and portfolio at two years to the Royal Society of Chemistry.

Direct award

This route is for members who have been working for six years or more in a role related to the chemical sciences, demonstrating professional skills and using chemical science knowledge at or above the Master's level. Once registered, you will be able to submit your evidence at any time before a twelve month deadline.

2.6 Your mentor and referee

Mentor: All CChem applicants need a mentor to help your development, or help you to review your career to identify suitable evidence for CChem. Your mentor is required to provide supporting statements against each group of attributes. Please see our guidance for CChem mentors.

Referee: All CChem applicants also need a referee to sign off your evidence as accurate. Your referee can be the same person as your mentor if they are able to support the veracity of your evidence. You will need a separate referee (who does know your day-to-day work) if your mentor is not familiar with your day-to-day role. Your referee could be your line manager for example.

Help with finding a mentor: We advise you to choose a mentor who is a CChem or other chartered professional from within your own workplace or someone from your existing networks such as an interest group. However, we recognise that this may be challenging if you are a lone chemist, work in a small organisation, a teacher or based in a country where CChem is not widely known. We can offer the following:

- Consultation with you to help you identify or confirm a suitable mentor. Please get in touch via email at cchem@rsc.org.
- Support to identify a suitable mentor from within your existing networks or find a mentor from outside of your networks. Please email us at cchem@rsc.org quoting 'Help to find a CChem mentor'.

3.0 ONCE REGISTERED – YOUR APPLICATION AND PORTFOLIO OF EVIDENCE

Once registered you will be required to provide evidence in your application, of how you meet 14 professional competencies. You will need to provide self-written testimonials describing how you have demonstrated the attributes and a portfolio of primary evidence to support your statements.

3.1 The attributes of CChem

There are five overarching areas of competence:

- A. Demonstrate and develop your knowledge of the chemical sciences**
- B. Professionalism**
- C. Communication and influencing skills**
- D. Professional responsibilities**
- E. Supporting the profession**

These are further broken down into 14 attributes.

Attribute	What this means	
A1	Explain how your knowledge of the chemical sciences informs your decisions and impacts on your work.	Use evidence to show that you use knowledge of chemical science subject areas and related areas to help you make decisions and take courses of action broadly across your work. You should cover how you make decisions based on your experiences as a chemical scientist or practitioner of chemistry. You should cover what decisions you have made and why. You should also tell us what the ultimate impact of your work was on the subject area (such as adding to a body of research), colleagues, customers, regulators and others (including students).
A2	Explain how you continue to develop your knowledge of the chemical sciences and how this impacts on your work.	Show how you increase your knowledge of chemical science that is both specific to your immediate role and more broadly. You should include how this personal and professional development links to your primary role and the positive impact this has had on your work. Evidence is more than just attending courses, you need to show what you have done with what you learnt.
A3	Demonstrate how you solve problems and draw conclusions by interpreting data, using evidence-based judgement and critical thinking to develop courses of action.	Use evidence to show how you make judgements and decisions based on scientific thinking and evidence. You should explain how you take a logical approach to solving problems and what information and resources you use to help you. This includes reflection on what additional expertise or knowledge you needed. This attribute is not limited to solving pure chemical science problems, but covers wider problems and issues such as those affecting resources or other individuals.
B1	Show how you work with autonomy, accountability and integrity in your role.	Show how you display personal leadership and have taken responsibility for the work you do, are able to plan courses of action and make decisions (rather than be told what to do). You should also explain what trust and authority was placed in you, what your role was and how you could reasonably justify the action you took. You may also wish to describe how you keep work-based commitments, deal with confidential work and intellectual property. This can also cover managing relationships such as being a manager, or working with external customers and collaborators.
B2	Describe how you make a successful contribution as part of a team and its impact.	Show how you are an active team member who makes valued contributions to teamwork, with positive outcomes. Contribution to teamwork can be made as an individual as part of a wider project, but also as a collaborative team member. You should explain what personal contribution you made towards the functioning of the team as well as towards the team's outputs and outcomes from the work. Teams can be large or small, within your area or cross-team. You should also include how you support your team members using leadership skills; this could be by helping their development, team motivation or sharing knowledge for example.
B3	Demonstrate where you plan, organise and deliver work and manage resources to meet organisational requirements.	Use evidence to show that you are able to plan your work, and understand how tasks fit together in the wider context of your organisation. This includes balancing tasks, prioritising action, allocating time and resources, managing budgets and people or tasks. You should also include reference to your organisational constraints and how you work within them.
B4	Describe how you contribute to continuous improvement by evaluating your work, and displaying adaptability.	Use evidence that shows you seek out opportunities to take proactive steps to make improvements in the workplace and/or to work undertaken that are based on sound scientific evidence. This includes implementing or improving existing initiatives such as resource management, cost saving, or time reducing measures. To evidence adaptability, think about how you deal with change. Change can include unexpected changes (stopping or starting a course of action) or planned-for changes that require significant disruption to established ways of working. Explain how you responded to the changes both professionally and personally, and how you successfully overcame any issues.
C1	Describe how you effectively convey information using both verbal and written forms.	This attribute is about using communication techniques to pass on information to others. This includes where you have written documents and given presentations or talks about your work. This can include both scientific and non-scientific information. You should explain who the audience was, how you ensured that you delivered the information in the correct format, and how you knew that you were successfully understood. You may wish to include any feedback you received.
C2	Identify where you consider and respond to alternative views and the influence this has on your actions.	This attribute is about how you take on information from others. This includes how you listen or reflect on feedback given to you about your work. 'Alternative' here does not mean that the views were opposed to your own, or that you were wrong. It means the views of others that could be equally as valid as your own view or thoughts. You may wish to explain how the feedback you have received has led you to change something. Or, you could explain how the feedback made you reflect on your work and your decisions to not make any changes.
C3	Explain how you exert influence in your role either directly or through networks.	Use evidence here of combining your communication and listening skills together with an ability to reason and bring others round to your way of thinking. This can include explaining how you went about successfully starting or stopping a course of action, who did you speak to, were they internal or external? You should outline what action you needed to take to influence. This could include making arguments based on evidence and data, or ensuring you have secured engagement with the relevant stakeholders. 'Directly' means that you had interacted with others on an individual basis. 'Through networks' could include examples of implementing ways of working or changes that others then follow - in this instance they may not have dealt with you personally.

Attribute	What this means	
D1	Describe your personal contribution and impact to ensuring a healthy and safe working environment.	This attribute is more than just following health and safety requirement such as wearing the appropriate PPE and completing COSHH forms. Use evidence to show that you have taken a proactive and positive step towards ensuring your workplace is safe and that the work environment is one which supports the health and wellbeing of yourself and others. This can also include supporting mental health and ensuring compliance with relevant health and safety assessments or regulators. You may also be making a contribution to supporting workplace environments of others. Note the attribute says 'a healthy and safe working environment' it does not specify 'your'.
D2	Explain how you contribute to a sustainable future.	Use evidence to show what actions you take to advance steps towards a sustainable future. 'Sustainable future' here means a future way of working or a workplace where you are able to continue work over a period of time, causing little or no damage to environment. This includes how you participate in and promote or improve existing sustainability initiatives such as recycling, reducing use of harmful chemicals, using alternative methods that reduce resources and time or increase efficiency, and supporting sustainable goals. Teaching others about sustainability is acceptable, as is working on projects or research that inherently contribute to sustainable goals. This can also include your involvement in setting workplace policies and positions, and your personal impact with regard to complying with regulatory requirements. However simply undertaking your own personal recycling is not suitable on its own as evidence as this is about how you undertake responsibilities in a professional rather than personal capacity.
D3	Describe how you adhere to relevant codes of conduct including the RSC Code of Conduct, relating to fulfilling your duties in the workplace, and ensure you apply ethical practice to your role.	Use evidence to show that you are aware of the relevant codes of conduct you follow in the workplace, making reference to how the RSC Code of Conduct is also relevant to you. You should also show an understanding of the steps you take to comply with these codes. This also includes ensuring that equality, inclusion and diversity practices along with ethical working are embedded in your work. You may also wish to reflect on the negative consequences of not following these codes and so highlight why they are important to follow.
E1	Give an example of how you have been an active member of the scientific community, either at work or outside work.	This attribute is an important aspect of CChem. You should show you seek out opportunities for supporting and promoting the chemical science profession. This can include activities that are related to the Royal Society of Chemistry, or other professional and scientific bodies. You should make reference to how you promote our profession to others either within your workplace or outside of it, with scientifically literate audiences or a general audience. This also includes how you support others within the chemical science profession through activities such as mentoring, but also others in the wider scientific community. Being an active member also covers involvement in small-scale activities and initiatives as well as those with a larger impact. It is not limited to science outreach.

4.0 CONDUCT WITHIN AN APPLICATION

The content of an application for CChem should be the work of the applicant and we expect all applicants to adhere to our **Code of Conduct**.

The RSC acknowledges that Artificial Intelligence (AI) tools may appropriately and ethically be employed as aids in composing or enhancing an application.

Acceptable uses of AI include:

- translation
- checking and correcting spelling
- checking and correcting grammar
- checking the readability of an application
- generating suggestions for alternative words (online thesaurus)

Applicants bear responsibility for the originality, validity, and integrity of the content of their application, even when employing AI tools for certain elements. Unethical use of AI (for example, generating generic or untrue evidence statements that don't relate to the applicant's personal experiences) or plagiarism may result in applications being rejected.

Applicants who use AI tools in the writing of an application, other than for the acceptable uses outlined above, must declare this when they submit their application. Further information on the use of AI can be found in our **guide to ethics**.

Using AI tools should not take the place of developing a strong working relationship with your CChem mentor. You should discuss your development and CChem application with your mentor at least once a quarter and often more frequently (such as once a month). More information about working with your mentor can be found on the members area when you start your CChem application.

5.0 IDEAS FOR EVIDENCING THE ATTRIBUTES

In this section, we cover some aspects of evidencing the attributes.

More information about how to evidence these attributes if you work in a laboratory, desk based role, academia and teaching can be found on the members area when you begin your application.

5.1 Providing your self-written testimonials.

You must:

- Provide fourteen self-written testimonials (one for each attribute) using two to three relevant examples explaining how you meet each attribute. We recommend using the STAR technique to frame your evidence. Set the situation, describe the task, outline what action you took and give details about the result you achieved. The result should also reflect meeting the attribute
- Use relevant examples that reflect the attribute and from work linked to the chemical sciences
- Write your testimonials in English
- Write in the first person, using 'I' rather than 'we'
- Emphasise your personal contribution in the examples that you have provided including your personal contribution to team goals and teamwork
- Emphasise your personal impact across your examples

5.2 Supporting your self-written testimonials with a portfolio of primary evidence

You must provide at least one piece of primary evidence per attribute.

This portfolio should:

- Be one PDF document with a title and contents page if submitted via email
- Be well laid out with each piece of evidence clearly labelled with the attribute letter and number
- Include one or more pieces of evidence per attribute that is no more than two years old at the point of submission
- Contain evidence with your name and date on it, or evidence that is countersigned by your mentor or referee
- Be a maximum of 45 pages in total that is inclusive of the title and contents pages, and any appendices

Important notice about UK GDPR compliance (General Data Protection Regulation)

It is the applicant's responsibility to ensure that their submission is compliant with data protection regulation. Please ensure that:

- You have made contributors aware of the purpose of including their personal data in your submission. This typically relates to testimonial evidence for example.
- Where the purpose has not been communicated, you have redacted personal data such as identifying names, telephone numbers and emails. This typically relates to emails with third party details that you might use as evidence.

If you are unsure about what to include, please speak to your organisation's own Data Protection Officer first. If you need to find out more about how we use and store your submission please refer to our privacy policy [rsc.li/privacy](https://www.rsc.li/privacy)

5.3 Fulfilling attribute E

Attribute E under 'Supporting the profession' is an important aspect of becoming and holding CChem status. Being an active member of your community is what sets a CChem member apart from their peers. Fulfilling this attribute offers you many valuable learnings that are readily translatable back into your work-life. There are many ways to fulfil this attribute and a few ideas are given below:

- **Improving students' science capital:** **Science capital** is the combined effect that all science-related knowledge, attitudes, experiences and social contacts has on an individual. This is a key facet of a students' interaction with science at all levels from school through university that impacts on their education and career choices. As an applicant there are several ways you can help add to student's science capital:

- Share your own career experiences with students. You can do this by giving a simple talk at a school or university, or build it into a more interactive session.
- Arranging or supervising student placements in your workplace.

Remember to liaise with the school or university when planning an activity, they know the audience best and you should draw on their knowledge and expertise to help you.

- **Coaching or mentoring colleagues:** You can do this informally or via a formal scheme such as the Royal Society of Chemistry **mentoring service** or workplace scheme if you have one. Remember to gain your mentee's permission to share details of your mentoring if you intend to use it as evidence. Your activities may be focused on developing technical aspects or support wider professional and career development.

- **Improving adults' science capital:** Activities that support developing the science capital of adults are also valuable and can include:

- Organising and delivering public outreach, organising or hosting site visits and open days, science communication through blogs and social media.
- Another example is sharing your knowledge and experiences of the chemical sciences with work-based audiences and through delivering technical talks across your wider team, or to other non-specialist audiences. Increasing the visibility of your work could be particularly valuable to your own career development.

- **Providing peer reviews:** Applicants can demonstrate this attribute by conducting peer-review for scientific journals and contributing to UKRI's peer review process. You can become a peer-reviewer for our journals, find out more **here**. There are several ways that this can be achieved for example, by completing several usable postal reviews, participating in panel meetings, or qualifying as a full member of EPSRC's Peer Review College. For more information on how to do this can be found at www.ukri.org/funding/peer-review. Peer reviewing journal articles can track their reviews on **Publons** a peer-review recognition website, by linking their ScholarOne account to Publons.

- **Involvement with professional bodies or other science associations:** There are a wide range of activities that qualify such as;

- Involvement with events and conferences linked to **your RSC local section or special interest groups**
- Volunteering with your professional body such with our **Chemists' Community Fund**
You can find out more about volunteering with the RSC and get involved here www.rsc.org/funding-and-support/volunteering
- Writing blogs, <https://blogs.rsc.org/ra/2020/06/23/open-call-web-writers>
- Involvement with **SCI** activities
- Representing your subject at interdisciplinary or cross organisational meetings, round table meetings and forums.