

Becoming a Chartered Scientist

Competence report – advice to applicants and mentors

Applicants for CSci will need to demonstrate competence across five areas. Guidance on what the assessors will be looking for under each competence is provided below but the examples are just indicative – there will be many other valid examples you can choose.

Here are some tips you should bear in mind when compiling your application:

- For each competence statement, you will need to give 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.
- You may use the same task or activity more than once but you should ensure you are clear on how it applies to the specific competence you are addressing.
- Most of the examples you provide should be fairly recent (in the last three years) but you can also draw on relevant experience further back in your career.

A: Application of knowledge and understanding

Identify and use relevant scientific understanding, methods and skills to complete tasks and address well defined problems.

A1: Demonstrate how you use knowledge, experience, skills and broader scientific understanding to optimise the application of existing and emerging science and technology.

You should provide sufficient detail here to show your deep understanding of your specialist scientific subject and how you have applied it. Further to this, include any examples of where your broader scientific understanding is applied to your area of practice. Examples could include but are not limited to:

- Writing and presenting internal papers, reports or standards;
- Conducting appropriate research to facilitate design and development of scientific processes;
- Writing primary journal articles and patents.

A2: Exercise sound judgement and understand principles of uncertainty in complex and unpredictable situations.

This competence is asking you to identify and be aware of the limit of your own knowledge and professional competence, to demonstrate an ability to manage your own strengths and

weaknesses and to recognise the level of risk attached to your actions. Examples could include but are not limited to:

- When you have reacted and dealt with an unexpected outcome;
- When you have approached a piece of work or project flexibly and in a novel or different way, or reacted to an unexpected outcome.

A3: Demonstrate critical evaluation of relevant scientific information and concepts to propose solutions to problems.

You should think of this competence in terms of selecting the best methodology, the subsequent data analysis, evaluations and conclusions you draw and how you overcome any barriers or issues. Examples could include but are not limited to:

- Engaging in experimental design and testing;
- Reviewing relevant literature, databases, manuals or designs;
- Statistical analysis and numerical modelling.

B: Personal Responsibility

Exercise personal responsibility in planning and implementing tasks according to prescribed protocols.

B1: Work autonomously and take responsibility for the work of self and others.

It is important for this competency to ensure you describe your contribution, responsibility and impact on a certain task or project and make it clear what you personally have achieved i.e. “I” not “we”. In formulating your answers and giving relevant examples, you should consider the following:

- You will be expected to undertake your work without day-to-day supervision and so you should demonstrate that you are able to achieve this;
- You should demonstrate your understanding of when you may need to seek guidance from others and how you would obtain this guidance;
- If you are responsible for managing the work of others, you should clearly describe how you discharge those responsibilities.

B2: Promote, implement and take responsibility for robust policies and protocols relating to health, safety and sustainability.

You should demonstrate that you understand the policies and protocols related to health, safety and sustainability that apply to the work you are undertaking giving examples where you have implemented and promoted them and describe any responsibilities that you have related to this. In formulating your answers, you should consider the following:

- Demonstrate that you know where these policies and protocols are documented, and that you are able to apply them in your practice;
- How your work contributes to the update and development of your departments/organisations policies and procedures;
- How you “promote” the awareness and application of these policies and protocols with others, especially peers and more junior colleagues.

B3: Promote and ensure compliance with all relevant regulatory requirements and quality standards.

You should demonstrate that you understand which regulatory requirements and quality standards apply to your area of work including data integrity and privacy. In formulating your answers and giving examples, you should consider the following:

- Describe what you do to ensure that these requirements and standards are being followed for those activities for which you are responsible;
- Describe how you “promote” the awareness of regulatory requirements and quality standards amongst peers and more junior colleagues;
- Describe how you safely store and handle data in line with national and international data protection and cyber security regulations.

B4: Oversee the implementation of solutions and demonstrate an understanding of potential and actual impacts of your work on your organisation, on the profession and on the wider community.

You should demonstrate an understanding of the potential and actual impacts of your work on your organisation, on the profession, on the general public and on the physical environment. Examples could include but are not limited to:

- Indicating that you are aware of the sensitivity of your work and show how this understanding translates into the ways in which you carry out your work;
- Showing an awareness of how your profession is portrayed and viewed by the public at large, and how you take responsibility for recognising this in the work you do;
- Describing how you seek to avoid reputational damage related to the work you carry out;
- Explaining how you set a good example to others in the way you discharge the responsibilities related to the work you undertake and the benefits to the organisation.

C: Interpersonal Skills

Demonstrate effective communication and interpersonal skills.

C1: Demonstrate the ability to communicate effectively with specialist and non- specialist audiences.

A non-specialist audience is anyone working outside of your particular area of expertise, so it would not necessarily be a non-scientist. Your example(s) should indicate how you have communicated in a way that is effective to each type of audience. In formulating your answers, you should consider the following:

- Not just the content of the message but also the mode or style of delivery that is adapted according to the audience;
- The feedback loop to gauge the understanding and improve future communications.

C2: Demonstrate effective leadership through the ability to guide, influence, inspire and empathise with others.

This competence is about understanding your leadership skills and is not reserved for those in management roles, it is applicable to all. Examples could include but are not limited to:

- Experiences of mentoring or coaching you have had; you should consider how effective this was and the overall impact;
- Considering when you have managed change within your organisation or overseen the implementation of any new processes; you should consider how effective this was and the overall impact.

C3: Demonstrate the ability to mediate, develop and maintain positive working relationships.

You should describe or define the “working relationship” and provide at least one example which focuses on your handling of a challenging interpersonal situation and demonstrates your ability to mediate and achieve a positive outcome. You should consider how through your approach you have changed or modified the behaviour or attitudes of others to positive effect. Examples could include but are not limited to:

- How you have managed the merger or integration of different teams;
- Managing working relationships across different departments or organisations;
- Interactions with committees, working groups or other professional body activities;
- How you have managed and resolved a difficult relationship situation between members of a team for which you are responsible.

D: Professional Practice

Apply appropriate theoretical and practical methods.

D1: Demonstrate how you scope and plan and manage projects.

Describe an example where you have developed a project scope with clearly defined boundaries and project plans. Any problem solving techniques used should be highlighted along with potential benefits of the project to the business. You should make it clear the level of autonomy you had while working on the project, especially when the project is large

covering multiple areas and a significant time span. You should show how you contributed to determining the resulting courses of action. Examples could include but are not limited to:

- Lead an operational project utilising resources across several disciplines;
- A change management project aligning processes across sites;
- An industry-wide project establishing guidance on technical standards and requirements.

D2: Demonstrate the achievement of desired outcomes with the effective management of resources and risks.

Using projects with which you have been involved as examples you should describe your roles and responsibilities in managing the activities to achieve the desired outcomes. Examples could include but are not limited to:

- Identifying the resources (people and/or money) needed to undertake the activities
- Monitoring and surveillance of the progress of the activities;
- Identification, evaluation and implementation of changes that may be needed to ensure the activities are successfully completed;
- Identification and management of risks that could impact on the successful completion of the activities.

D3: Take responsibility for continuous improvement within a scientific or technical environment.

Your examples should indicate what actions you take to make improvements to your organisation as a whole. This could be through encouraging the continuous development of junior staff or through improvements to processes within the organisation. Examples could include but are not limited to:

- Evaluation of the performance of specialists methods and tools used;
- Development of recommendations for future enhancements or modifications to procedures or working practices in order to achieve performance improvements;
- Description of examples where your actions have led to performance improvement by yourself or others;
- Identification of lessons learned from activities undertaken by yourself or by others for whom you are responsible, such as what went well, went badly or was lacking.

E: Professional Standards

Demonstrate a personal commitment to professional standards.

E1: Comply with and promote relevant codes of conduct and practice.

You should provide comprehensive examples of how you have applied and promoted the codes of conduct under which you practice and the outcome.

Examples you may wish to include but are not limited to equality, diversity and inclusion, reliability and integrity and ethical practices.

E2: Demonstrate a commitment to professional development through continuing advancement of your own knowledge, understanding and competence.

Your answer should provide specific examples of what you have already done in terms of continuing professional development (CPD) and your plans for the coming year. In your examples you must describe how your engagement in CPD has benefited your practice and the users of your work and reflect on its impact.

Examples can be taken from any of the five categories of activity (work based learning, professional activity, formal/educational, self-directed learning and other).

e.g.

- Application of knowledge acquired on an external course that has benefitted the business – how you acquired the knowledge of a new technology and how you planned, implemented and reviewed its success in your organisation;
- Your work to promote careers in the STEM area including the design of materials and reflection on success.

We are not looking for a list of courses here but evidence of how your CPD benefits your practice and benefits others.

(Note registrants will need to comply with the Science Council CPD Standards)

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