Becoming a Chartered Scientist

Competence report – advice to applicants

Applicants for CSci will need to demonstrate competence across five areas. Guidance on what the assessors will be looking for under each competency 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.

- The examples must have sufficient depth that the assessor should be able to visualise what you did from your description. To achieve this, it might be useful to explain what you did, how you went about it and why you did it. Or consider using the STAR format to draft each competency, focusing on describing the **Situation, Task, Action and Result.**

- 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 competency you are addressing.

- Some of your competency answers may seem fuller or easier to complete than others – this is normal and is illustrative of the wide spectrum of scientists who wish to become professionally registered.

- Most of the examples you provide should be fairly recent (within the last three years) but you can also draw on relevant experience further back in your career.

- If you are undecided which examples to use to illustrate the competency, don't forget to read the statement in tandem with the competency group heading. For example, answers to the D competencies should be written through the lens of your professional practice.

- You should aim to write approximately 300 words per competency. *

*Word Limit

Please aim to write around **300 words per competence** - too few words may not give the assessors enough detail to fully understand your strengths, while too many could make your key points less focused and harder for the assessors to follow.

Aim to be concise yet comprehensive, providing clear examples of how you meet the standard without unnecessary detail.

The guidance below is not specific to any Science Council Licensed Body. Each Licensed Body will have their own guidance to which applicants can refer. This document is intended to advise applicants using the Common Application Process or those exploring Science Council registration. It can be used by Licensed Bodies as a basis for their own guidance if required.

A: Application of knowledge and understanding

This competency grouping is looking at how you: Identify and use relevant scientific understanding, methods and skills to complete tasks and address well defined problems.

The A competencies are your opportunity to demonstrate your scientific knowledge and understanding and how you apply them in the workplace; what knowledge you have gained and how you translate it. There are 3 competencies within the A group which each have a different focus, try and think of ways you can evidence these competencies. They could include:

- Investigating new techniques
- Scientific reports
- Data analysis
- Devising, reviewing, selecting, adapting or improving a method
- Optimising a process or equipment using prior knowledge

> **In this document the text in blue is the competence statement itself. This will be documented in the application form and must be evidenced in your answer. The black text is guidance about what you might want to consider in your evidence but is not intended to be an exhaustive list.**

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 competency 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

This competency has a lot to focus on, try and give an example of where you came to a sound conclusion based on certain or uncertain data, or where you have uncertain data but you know the limitations of the data you are using.

You may want to consider what uncertainty means in science before attempting this competency.

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

You should think of this competency in terms of selecting the best methodology, the subsequent data analysis, evaluations and conclusions you draw and how you overcome any barriers or issues.

Have you got the skills to critically evaluate information scientifically that is delivered by your technologies?

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.

You may find that your answer to A3 is an extension of A2 - demonstrating how you solved the problem described in A2, especially if you don't work in a laboratory setting.

B: Personal Responsibility

This competency grouping is looking at how you: Exercise personal responsibility in planning and implementing tasks according to prescribed protocols.

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The B competencies are focussing on your personal responsibility, specifically in the scientific workplace.   There are 4 competencies which look at different aspects. Different areas of your work that you could include are:

- Crisis management
- Laboratory or team organisation
- Maintaining quality outputs
- Health and Safety responsibilities
- Sustainable practices

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.

Sustainability doesn't only focus on environmental impacts, although this is an important area to address if you do so in your practice. Other aspects that you could use include:

- sustainability of the workforce and succession planning
- financial sustainability
- sustainability in education and training

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.
- If you have to follow different levels of regulatory frameworks e.g. company/government, you should include how the differences impact on your practice.

Please note that this is a different focus to Codes of Conduct which are covered in a later competency – this is looking at how you work within these standards and requirements in the workplace.

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.

This is quite a complicated statement with two distinct parts, so please ensure that you address all aspects of it including the impacts of your work – lots of applicants often miss

noting the impact on the wider community. This could include an awareness of the impact of your work in your own department, wider organisation or the wider industry.

C: Interpersonal Skills

This competency grouping is looking at how you: Demonstrate effective communication and interpersonal skills.

The C competencies are looking for evidence of your interpersonal and communication skills. While most of your examples will be from your workplace, you may wish to use wider evidence if it fits better. There may be slight overlap between each area so please ensure you have read each of the competencies in this group before starting. There are 3 competencies to address here. Some examples to think about could include:

- Leading meetings
- Giving presentations
- Work with regulators
- Line management

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.

You could consider inclusion and how you demonstrate this in this competency – this may help you illustrate empathy.

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

This competency grouping is looking at how you: Apply appropriate theoretical and practical methods.

The D competencies focus on your professional practice. They are distinct from the other competencies although there may seem to be overlap on first viewing (especially with the A group). Some examples to consider including could be:

- Trouble shooting a method
- Scoping and then managing projects
- Reducing hazards and waste

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.

You may not manage large scale projects, but you should be able to pick some work to focus on in this section, looking at how do you scope the tasks, and how do you break them into subtasks.

D1 and D2 could be written in tandem, focusing on the same project – this competency is focussing on the planning and D2 on the delivery/outcomes.

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.

D1 and D2 could be written in tandem, focusing on the same project – this competency is focussing on the delivery/outcomes of the project whereas D1 was focussing on the planning phase.

Getting a desired outcome or an effective solution at the end of it is completely different to managing a project or managing a team so this should have a different focus to the earlier C competencies.

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.

This competency is not about your personal improvement (process improvement rather than personal), but about what you've done to improve your working environment or the company you work for. This could focus on lessons that you have learned from practice, and where hopefully, people have, at the completion of projects undertaken review and then taken forward any improvements. 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

This competency grouping is looking at how you: Demonstrate a personal commitment to professional standards.

This section has a different focus from the other areas and should be looked at through the lens of 'professional standards' – not just within the workplace but in your wider interactions. Examples could include:

- Your Professional Body's Code of Conduct
- Codes of Conduct for your employers (e.g. Civil Service Code)
- Your commitment to EDI initiatives
- Your ethical principles

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 outcomes of this.

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

Assessors will be looking for your understanding of ethical practice and compliance with codes of conduct is only one part of ethical practice. This could include how you see the need for personal accountability in your practice.

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.

You should ensure that the CPD you include is planned, executed and then reviewed after completion to gauge the impact of your CPD, rather than focusing on lists of activities. Consider how the outputs of your CPD may feed forward into your future personal and professional development.

Once you have gained registration you will need to commit to maintaining your Continuing Professional Development as a scientist and comply with Science Council CPD standards.