

Working towards Professional registration Handbook



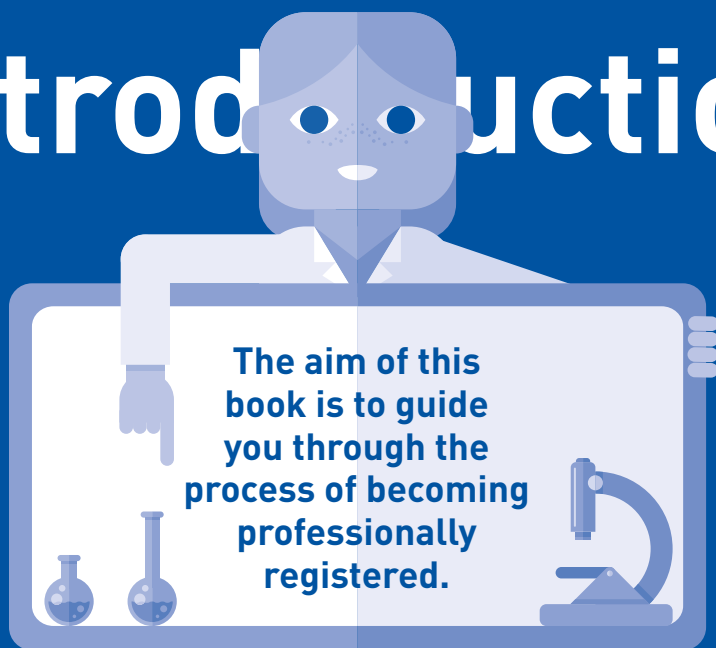
RSciTech
Registered
Science Technician

CSci
Chartered
Scientist

CSciTeach
Chartered
Science Teacher

RSci
Registered
Scientist

Introduction



Professional registration can boost your chances of employment and promotion as it shows dedication to a career in science.

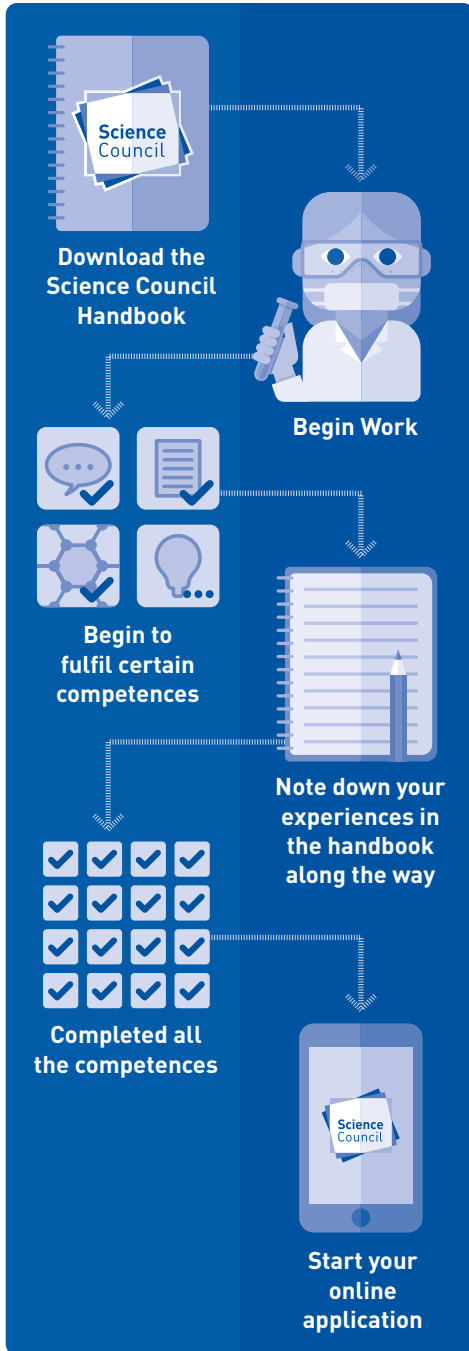
Professional registration acknowledges the vocational skills that you gain through work, alongside your academic knowledge. Professional registration is valued by employers, as it demonstrates your commitment to professional standards and development.

To become professionally registered, you have to provide evidence of having achieved sixteen competences. As you gain further experience throughout your

job you will be able to complete more competences. Once you have met them all, you can start your application online.

This handbook allows you to make the most of your employment, as you are able to record and track your experiences from day one. This should encourage you to adopt a more organised approach to identifying your strengths and areas for development.

With so many varied and interesting opportunities available within science, there has never been a more fascinating time to be a scientist.



My work goals

[illegible]

About The Science Council

The Science Council supports and recognises professional scientists and science technicians, across all disciplines of science, throughout their careers.



Case study

Suzanne Davies RSci gained Registered Scientist status in 2016. She now works for PepsiCo.

Why did you decide to work towards Registered Scientist status and what were you hoping to achieve by doing so?

The potential to apply for RSci was first introduced to me during my placement year. As soon as I heard about this I was very keen to get involved. I often think that Food Science as a degree isn't respected as being as scientific as the core sciences. Therefore, being given the opportunity to gain a professional competence based award that further supports the degree I have studied was very attractive. And something more to add on my CV is never a bad thing!

How has being a Registered Scientist helped you get on to the first step of the career ladder after graduation?

After graduation, I was offered a job with my placement company, PepsiCo. Therefore, my performance throughout the year whilst on placement was very valuable. Keeping a record of all this continuing professional development as part of being a Registered Scientist will really help me in future job interviews internally within PepsiCo or externally.

“Having something on your CV that stands out from other applicants, in addition to academic qualifications, is always an advantage and something I will continue to update in the future.”

What advice would you give to those who are just starting the process of working towards RSci?

You will be surprised how soon the work you carry out is relevant towards your application. Often, 6 months into your job, you can forget about a lot of the smaller achievements that could still be relevant. It can also give you an idea of what of you need to do and focus on during your placement, helping you identifying areas in which you are lacking appropriate examples of competence.

Through your work experience you should be able to meet many of the competences, and then you can start to focus on developing yourself in the areas where you are struggling.

If you do gain your Registered Scientist status, make sure you use it! Put it on your CV, your LinkedIn profile and when someone asks you the significance of this award, you can explain the hard work that's gone into it.

How to use this handbook

There are five sections, broken down into sixteen competences, which cover the five areas of professional standards.

1

Interpersonal and Communication Skills

- Can you communicate effectively within the workplace?
- Do you demonstrate good interpersonal skills?
- Do you demonstrate an ability to resolve problems?

2

Responsibility

- Can you work individually but recognise your limits?
- Do you take responsibility for working safely?
- Do you make sure quality standards are upheld?
- Can you take responsibility for planning a course of action?

3

Knowledge and Understanding

- Do you maintain a strong scientific knowledge?
- Can you adapt your scientific knowledge to new areas?
- Do you use pre-existing scientific theories to propose solutions?

4

Professional Practice

- Why do you carry out certain tasks in a specific manner?
- How do you contribute to helping your workplace run efficiently?
- How do you help identify problems and implement solutions?
- How do you attempt to work more efficiently?

5

Professionalism

- Do you comply with professional codes of conduct?
- How do you enhance your own professional development?

There is no correct order to fill in the book! As you gain more experience you will be able to successfully fulfil the different requirements.

This handbook may take you a while to complete, while you grow in your career and develop your professional skills.

Therefore, use this book to note down your thoughts and experiences throughout the year.

You will be required to write prose when you fill in the final competence report as part of your online application.

Throughout this handbook we have provided various examples for you. Some of these take the form of bullet point entries, whilst others are longer prose. These longer answers are what we will be looking for when you complete your competence report.



1 Interpersonal and Communication Skills



This sections asks you to highlight examples of your interpersonal and communication skills. Below you will find the competences you need to fulfill and some examples of how you could complete them.

Demonstrate effective and appropriate communication skills

Scientists must be able to effectively communicate within the workplace in order to make efficient progress. Therefore, note down examples that demonstrate your communication and social skills.

For instance, you may explain how you present work to your team, or how you prepare written reports. Alternatively, you could describe how you determine objectives with your supervisor and update them on your progress.

Example

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> ■ Agreed aims with supervisor during 1:1 meetings ■ End of year poster presentation ■ Presented in department meetings | <ul style="list-style-type: none"> ■ I wrote numerous reports on the work that I completed this year ■ I worked interdepartmentally, with both the Chemistry and Geology departments. ■ Trained my colleagues on the work I had completed |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

My notes

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Demonstrate interpersonal and behavioural skills

A successful scientist must be able to collaborate with their colleagues and work with others. Therefore, please identify how your social and interpersonal skills have developed within your time at work.

For instance, have you had the chance to train/teach others? How do you interact with a host of different people (students, trainees, supervisors) and adapt your interpersonal skills to the relevant audience?

Example

I supervised an A-Level student on work experience at Pfizer for a week, which required arranging activities for her and preparing for time spent as a mentor. This included time spent working in the lab, tours of different areas, and career-type discussions. I mentored two other work experience students at different times for a day each. This was very valuable; as I had to alter my approach in discussing science with an audience that does not have the same experience as my colleagues. I had to learn how to engage the younger students appropriately.

My notes

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Helium walks into a bar and orders a beer, the bartender says, 'sorry, we don't serve noble gases here.' He doesn't react.

'Art is I; Science is we.'

Claude Bernard

French Physiologist, 1813-1878

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❑ Demonstrate productive working relationships and an ability to resolve problems

It is vital that scientists are able to resolve problems in the workplace and attempt to work with others to produce effective results. Therefore, this is your chance to note down examples of how you have helped resolve workplace

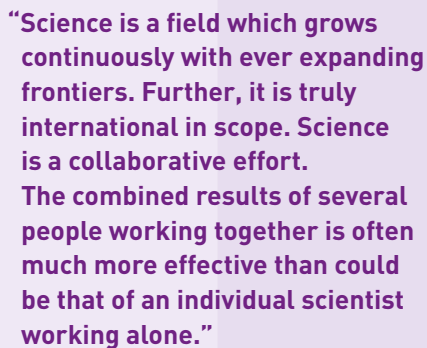
disputes, or whether you have shared information with others that has helped overcome a problem. In addition, you may be a member of a particular group that achieved certain goals.

Example

I was regularly flexible with my working hours and when I performed certain tasks to best assist and support colleagues. For example, I would tailor when I performed my longer experiments to days when I knew colleagues did not require any support. I then performed smaller tasks on days when colleagues required more support to ensure I could ably assist. When I required a colleague to perform an experiment for me I would provide plenty of notice and be flexible and considerate to avoid scheduling conflicts. I would also make sure to thank colleagues using the OWNIT! system.

My notes

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Recipient of the Nobel Prize in Physics twice
(23 May 1908 - 30 Jan 1991)

[illegible]

2 Responsibility



The next section asks you to explain how you are responsible for certain tasks but are also able to recognise your limits of capability.

☐ Work autonomously while recognising limits of scope of practice

It is critical that scientists are able to work independently but can recognise when they may need help from their supervisors or others.

Therefore, in this section you should demonstrate how you are able to work on your own projects, but are not afraid to ask for assistance when needed.

My notes

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“Though neglectful of their responsibility to protect science, scientists are increasingly aware of their responsibility to society.”

John Polanyi
1986 Nobel Laureate for Chemistry

- Take responsibility for safe working practices and contribute to their evaluation and improvement

It is imperative that scientists operate safely and within their scope in order to prevent injury to themselves or others. Therefore, this sections asks you to explain how you maintain safety within

the workplace; for example have you completed risk assessment or attended safety training sessions? Alternatively, have you identified safety issues and helped implement solutions?

My notes

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Example

- Adhered to the 'Good Manufacturing Process' dress code and safety within the manufacturing area.
- Completed Manual Handling training and other various safety training such as diphoterine training, fire safety awareness and nitrogen training.

Q: Why can you never trust atoms?



A: They make everything up!

- ❑ Take responsibility for planning and developing courses of action as well as exercising autonomy and judgement within broad parameters

Scientists need to take responsibility for planning a course of action. Progress is typically made when scientists develop a strategic plan in order to achieve certain results. Therefore, please note down examples of tasks that you have

taken responsibility for. This may be devising plans in case of an emergency or alternatively you may help with the housekeeping in the labs. This is your chance to explore what you are responsible for within the workplace.

My notes

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**“I haven’t failed. I’ve just found
10,000 ways that won’t work.”**

Thomas Edison
1847-1931

3 Knowledge and Understanding



**A professional scientist
can adapt their
knowledge to new
and different areas.**



As a scientist, you will have learnt a great deal of information throughout your studies. The next section asks you to identify how you are able to use your pre-existing science knowledge to succeed within the workplace.

□ Develop, maintain and extend a sound theoretical approach to application of science and technology in practice

Science is constantly progressing and, therefore, it is vital that scientists maintain a strong grasp of their field. This section is about indicating how you maintain a strong knowledge of science

and its application. For instance, this may involve signing up to journals within your field. On the other hand, perhaps you are involved with a society or undertake further academic work.

I work in a Good Manufacturing Practise (GMP) area so undergo ongoing training to ensure that I am GMP compliant.

My work this year has led me to successfully submitting an abstract to present a poster at the Academy of Pharmaceutical Sciences conference in September





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☒ Apply underlying scientific concepts, principles and techniques in the context of new and different areas of work

To be a successful scientist, you must be able to apply your pre-existing scientific knowledge to different areas. Therefore, this section involves you noting how you have used the science learnt throughout your education

to succeed in novel and different areas. For instance, this may involve you explaining why you used certain equipment that was unknown to you, or perhaps you were involved in a new procedure or design.

Example

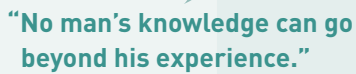
We had to work out the volume change that occurs to a product during heating. Although I had not worked in the field before I used my prior knowledge on water displacement to conduct an experiment, whereby we were able to measure the slightest changes in volume by displacing known volumes of water. This worked extremely well and the results were invaluable for my research.



My notes

A: Because it conducts itself so well.

Alternatively, you may analyse others work, or that seen in literature, and advise them on how they may overcome their problems.



4

Professional Practice



The next section is aimed at identifying how you have contributed to the effective and efficient running of your workplace.

Identify, review and select scientific techniques, procedures and methods to undertake tasks

It is key that scientists work efficiently in the workplace. Therefore, in this section you should note down why you chose to conduct procedures in certain ways. For instance, was it because

this method was better than others available? Was it cost effective? Was it the quickest and most efficient way? Did you have to take software or IT considerations into account?

Example

When developing the powders for my project, no certified method existed for analyzing the slurries and powders that I had made. Hence, I worked alongside analytical equipment experts in the team to develop methods for testing parameters such as particle size distribution, pH, and viscosity of the slurry. To do so, I made a list of the equipment that was available in the chemistry lab on site. I then conducted literature research to identify the best equipment to measure product characteristics, and tried to apply them to the equipment we already owned. I managed to develop methods for all the parameters necessary for specifications, using equipment already present in the lab. Hence, no additional cost was incurred to allow me to accurately and precisely measure product characteristics. Furthermore, all the methods developed produced immediate data for analysis, which is useful when quality control testing is done.



My notes

☒ **Contribute to the organisation of tasks and resources**

All scientists should aim to keep their workplace running efficiently. Therefore, please think about how you have contributed to the running of an effective work place. For example, do you organise safety checks or a cleaning rota? Alternatively, perhaps you may be involved in ordering certain equipment or materials.

My notes

Example

- Able to work flexibly to support colleagues in their tasks while performing my own independent project.
- Worked as an activity leader for a STEM event and so organised the necessary equipment, people and materials to ensure the activity was a success.
- Gave the relevant training to volunteers who had not participated in a STEM activity before.



**“I must consider the organiser
as more important than the
discoverer.”**

Carl Wilhelm Wolfgang Ostwald
1883-1943
German Chemist

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- ❑ **Participate in the design, development and implementation of solutions**

At some point throughout your time at work, there is a chance that something may go wrong. Perhaps a piece of machinery broke or you couldn't

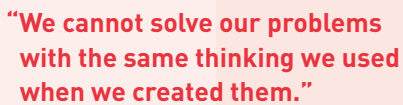
understand why your results were so far off expectations. This is your chance to highlight how you identified problems and then were able to implement effective solutions.

Example

When developing new products for a vegetarian range, there was an initial texture issue- the products crumbled. I made suggestions to the development chef that seeds such as flax could be used to form a gum. I followed this up with the necessary research to find out quantities and test formulations. When this was included in the recipe, the texture was vastly improved. This client is now working on retailer trials of their products in order to be able to launch them later this year.



My notes



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Contribute to continuous performance improvement

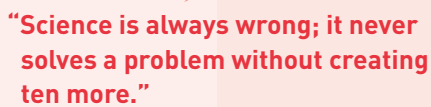
The aim of this section is to identify how you can improve your performance and efficiency within the workplace. For instance, you may have to stick to a certain budget or work within certain

time frames. Talk about how you have developed and improved certain skills as you have gone through your time at work.

Example

- Updated SOP which will be used in future clinical manufactures
- Investigated new change part (dosing disk) and proposed to the department. This change part will reduce excipient waste and time wasted on re-setting up the machine.
- Worked interdepartmentally to test a new method for scaling up from lab-scale to clinical manufacturing scale. This meant arranging meetings with my supervisor and members of another department to propose the idea and presenting on the developments and final results.

My notes



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5 Professionalism



This section allows you to identify how you go about complying with your workplaces codes of conduct and enhance competence in your area of practice.

☒ **Comply with relevant codes of conduct and practice**

This is your chance to explain how you comply with certain codes of conduct. These may be your professional body's code of conduct, or alternatively those

within the workplace. You may also have to comply with certain Health and Safety Legislation, or Good Laboratory Practice.

Example

My Company has a strict code of conduct which all employees are expected to adhere to, and has a number of policies on confidentiality, and alcohol and substance abuse in the workplace.

I was briefed on these policies during my induction, and also read through them in detail later on. There are also a number of rules enforced across site to ensure the safety of all employees. These include not walking whilst using a mobile phone, and always using the crossings provide to walk across roads. Besides this, I have listened to a number of talks on best laboratory practice, which include advice on personal protective equipment and instructions on disposing of materials safely.

I strive to employ good housekeeping practice when working in the lab by labelling samples clearly and thoroughly cleaning all equipment immediately after use.



My notes

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Checklist



Interpersonal & Communication Skills



Personal Responsibility



Knowledge & Understanding



Professional Practice



Professionalism



Registered Online



Application Successful



RSCi Status Awarded!



Well done if you have now ticked all the boxes and completed the handbook. It is time for you to begin the online application process. Now that you have examples for all the different competence areas, it should not take you long to complete the application! Head over to **sciencecouncil.org** to get professionally registered!



Top Tips for filling in the Online Competence Report

- Think about **what** you did, **how** you did it and **why** you did it
- You can **use the same example** as many times as you like
- Don't be afraid to **show off!**
- Provide plenty of **detail** – even if it seems obvious
- **Say 'I'** not 'we'



Science Council
c/o Fora, 71 Central Street
London
EC1V 8AB

www.sciencecouncil.org

📞 020 3434 2020

✉ enquiries@sciencecouncil.org

🐦 [@Science_Council](https://twitter.com/Science_Council)

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