

Becoming a Registered Science Technician

Competence report – advice to applicants and mentors

Applicants for RSciTech 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: Apply knowledge of underlying concepts and principles associated with area of work

Explain the major reasons for undertaking your work. For example:

- *working in a particular subject discipline in an applied science area. You should 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.*
- *involved in 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.*
- *involved in using a particular experimental model or computer programme. You should explain why you are using that specific model or programme, and describe in technical detail how you are using 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. For example:

- *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 has been successful or not and what your data, observations, or measurements mean, relating it to the underlying principles. You should also be able describe how you present information in an appropriate manner in order to explain your judgement.

For example:

if successful, your example should describe the rationale/scientific basis behind this conclusion and why the data, observations, or measurements might mean this.

- *if not, how you gave reasons why the activity 'failed' and what you proposed to do next time to address this. Your example should also include how you explained/demonstrated 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

Show how you carry out work with minimal input from your supervisor for certain key tasks, experiments or procedures associated with your role and completing 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 no or little further input, until discussing the outcome with your supervisor.*

B2: Manage and apply safe working practices

Explain the safe working practices applicable to your area of work and describe how you follow them. For example:

- *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*
- *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 – including if an activity does not work in the way that you expect. For example:

- *ensure that an activity is carried out to the agreed standard or protocol (e.g. good laboratory/workshop/design practice) and your example should provide evidence for this.*
- *understand when something might not have been carried out quite correctly and what impact it could have on the quality and reliability of the outcome.*

- *point out 'good experimental data' and 'bad experimental data' and the reasons why the bad data might have occurred*

B4: Take responsibility for completing tasks and procedures as well as using judgement within defined parameters

Give an example that describes how you accept responsibility for completing a task/procedure to the required time line and how you are proactive if the time line might not be met. For example:

- *an experiment or process failed*
- *a critical piece of equipment or tooling failed*
- *a critical reagent or material running out*
- *a staff absence making it impossible to complete on time*

In your example you should describe how you proactively judged how and when you communicate this 'negative news'. In addition 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 *Show that you are an effective communicator through using appropriate oral, written and electronic means. Your examples should include a description and details of:*

- *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 or other aspects of 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*
- *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. 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 or trainees face to face*
- *interacting with external colleagues (such as suppliers, couriers etc)*

For this section it may be appropriate to discuss these with your supervisor, as an external perspective is often very useful.

C3: Demonstrate an ability to work effectively with others

This refers to team work, which can be in a large team or on a 1:1 basis. Your example should illustrate how you worked collectively with others, what your role was, and what the outcome was.

For example:

- *how you work with researchers, technicians or other members of staff*
- *how you work with students or trainees face to face*
- *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

Describe an example which will 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'. Your example should describe your understanding why this might have 'failed' and how you identified how you might 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

Give examples of work that you have undertaken where the method, procedure, programme, equipment, or materials used was chosen as the best (or most relevant) to use. Your example should describe how you planned and organised these 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*
- *machine tool time*

D3: Participate in continuous performance improvement

Give an example, which shows how you are aware of progress in your area, and seek ways of improving the efficiency of your work. It should describe how you seek to discuss with your supervisor the strategy for achieving this. For instance this could include new and improved methods, new ways to increase throughput, or ways to increase cost-effectiveness. Examples might be your role in:

- *looking for cheaper resources*
- *buying equipment or consumables*
- *reviewing procedures*

E: Professionalism

Demonstrate a personal commitment to professional standards

E1: Comply with relevant codes of conduct and practice

Give examples of how you:

- *comply with your professional body's code of conduct*
- *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.*

E2: Maintain and enhance competence in own area of practice through professional development activity

Show that you undertake activities to enhance your competence in your own area of practice i.e. Continuing Professional Development (CPD).

Note that you will need to comply with the Science Council CPD Standards for Registrants and you will be asked by your professional body from time to time to demonstrate evidence that you meet the standards.