The Science Council response to Office for Life Sciences "Life Sciences Apprenticeships" market-engagement exercise (Notice ID 2025/S 000-032465, published 16 June 2025)

ABOUT YOU AND YOUR ORGANISATION

1. Contact Name

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2. Contact Email:

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3. Name of Your Organisation:

The Science Council

4. How would you describe your organisation?

Registered charity 1131661

The Science Council is a Royal Charter charity: a collaborative connecting and amplifying hub for 30+ professional bodies across the breadth of science. Collectively, these organisations have over 320,000 individual members in every type of role across the science workforce. Our purpose is to strengthen the collective impact of the science community for public benefit. We do this by connecting the science professions to foster knowledge exchange and through our professional registers, which offer interdisciplinary recognition.

We licence four professional registers Chartered Scientist (CSci), Registered Scientist (RSci), Registered Science Technician (RSciTech) and Chartered Science Teacher (CSciTeach), and have UK and international registrants. Our vision is a diverse and growing science profession that is trusted, respected innovative and equipped to meet regional, national and global challenges.

Our 2025-28 strategy, *Elevating the science workforce,* commits us to champion apprenticeships, T Levels and other technical qualifications as important routes into science careers and towards a more diverse workforce.

Since 2020 we have led a UK-wide programme supported by funding from the Gatsby Charitable Foundation. This 'Technical Pathways Programme' focuses on raising the profile and prestige of technical education routes into and within scientific careers. We work with apprentices, apprenticeship and T Level providers and assessment organisations, a wide range of employers, professional bodies, and national organisations that shape the landscape for scientists, science technicians, and science educators.

5. Current Annual Turnover (if applicable):

c. £970,000

6. Current Number of Staff/Employees

15 staff. Ten full-time and five part-time, supported by over 200 volunteers.

7. If you are a Life Sciences organisation, which sub-sector(s) do you operate in?

N/A

8. Are you an apprenticeship or training provider, or do you provide support to companies employing apprentices?

The Science Council is not an apprenticeship or training provider, although some of our member bodies are. For example, The Organisation for Professionals in Regulatory Affairs (TOPRA) is the professional membership organisation for individuals engaged in regulatory affairs for human and veterinary medicines and medical devices worldwide.

The Science Council champions apprenticeships, T Levels and other technical qualifications as important routes into science careers, and to support growing a more diverse workforce. We gather insight to inform interventions for employers to offer apprenticeships and T Level placements, and to help young people and their parents to understand the opportunities and benefits. Recent insight work drew input from 127 employers, 19% of which were SMEs. This enables us to shape contextually relevant interventions.

Our systematic mapping of apprenticeships to the competencies required for professional registration is enabling increasing numbers of apprentices to gain early career recognition as a Registered Science Technician or a Registered Scientist, via a shortened application process. This underlines the professional and practical benefits of science-based apprenticeships and provides internationally recognised professional accreditation to people for whom alternative routes through degrees may not be suitable.

We also provide engagement activities and resources to promote technical pathways. The Technical Pathways Programme has engaged over 11,500 teachers and early-career scientists in the past two years through five complementary activities: curriculum-resource downloads, live CPD webinars, online career workshops, regional roadshows and a digital-mentoring pilot.

ROLE OF APPRENTICES IN YOUR ORGANISATION

The feedback in this section is distilled from responses to a specific information request for this submission which the Science Council sent to employers we work with, our member organisations, and includes our insight work.

9. Do you currently have apprentices in your organisation?

No, we do not have apprentices in our organisation but we work with organisations that do or are thinking of doing so. The Science Council also provides advice, guidance and materials for providers and apprentices.

Apprentices fill critical pipeline gaps from Levels 3-6, for example: laboratory technician (level 3) and laboratory scientist (levels 5 and 6); pharmaceuticals manufacturing technician, biotechnology manufacturing technician, healthcare science associate (level 4); and practitioner (level 6) biomedical scientist, clinical trials specialist, and data scientist. Apprentices also fill pipeline gaps for important niche roles at level 7, such as: research scientist, operational research specialist, regulatory affairs specialist, and bioinformatics scientist.

To deliver the Life Sciences Sector Plan we need a worldclass, substantially homegrown, expanding and increasingly interdisciplinary technical workforce to support research and development ambitions and provide

resilience in delivery. This should include greater numbers of clinical trials specialist apprentices and the need for artificial intelligence apprentices which will continue to rise.

The scale and nature of science-based apprenticeships varies considerably. In 2023/24 (the most recent year of available data[1]) there were about 420 starts on the L3 Laboratory Technician standard, and about 220 starts on the L6 Laboratory Scientist standard with an integrated degree. By contrast, more specialised occupational standards have much smaller cohorts, such as L7 Operational Research Specialist with around 20 starts, L7 Bioinformatics Scientist with around 10 starts and L7 Health and Care Intelligence Specialist with 10 starts.

Similarly, the scale and nature of apprenticeships embedded by employers varies considerably. To provide just three examples: UKHSA/North Bristol NHS Trust employs eight Level 6 Healthcare Science Apprentices and one Level 4 Data Analyst apprentice. TOPRA delivers a Level 7 Regulatory Affairs programme used by pharma, med-tech and the Medicines & Healthcare Regulations Agency (MHRA). At the University of Cambridge there have been nearly 700 apprentices over the last three years who have trained in IT, estates, lab support, business administration, clinical sciences and communications. These are offered at Level 2-7, and the University is expanding their apprentice programme in digital sustainability and technical support.

10. What barriers or challenges do you face in taking on apprentices?

Barriers reported to the Science Council from employers, members and providers include:

- Workforce capacity for off-the-job training is a challenge. For example, NHS diagnostic labs struggle to release staff without service impact.
- There is an issue with provider continuity and quality. As an example, a Level 4 Data Analyst apprenticeship provider ceased mid-programme which required the employer to commit significant time and resources to ensure the apprentice could continue their training.
- Reduced funding can impact efforts to address the growing regulatory skills gap which supports niche, high-impact regulatory and digital health positions, as well as those requiring clinical competencies.
- There is a risk of programmes being compressed. Level 6 Healthcare Science has reduced from four years to three years and there is a risk of overload for the individuals working to complete their apprenticeship, impacting the service delivery that the NHS needs.
- There is low SME awareness of apprenticeships and limited bandwidth to take on apprentices. In 2024/25 the Science Council conducted an employer survey. Of the 127 employers who responded, 40% said that the administrative burden, including recruitment, onboarding, and navigating the funding requirements was a barrier to offering an apprenticeship,
- Just under half (48%) of respondents said a lack of staff to provide training and supervision was a barrier and over a third (37%) said limited connections with local apprenticeship training providers, including colleges, was also a barrier.
- Over a quarter (28%) felt that apprenticeship programmes were not aligned to professional practice. In addition, we know that the progression route between apprenticeship levels and professional roles can be unclear.
- Apprenticeship training providers, via our advisory groups, have said they struggle to recruit educators with appropriate industry experience to deliver high quality training to complement workplace learning. They also highlight the pivotal role of workplace line mangers of apprentices and consequently stress the need for support and development for these line managers.

11. What additional support would help your organisation to take on apprentices?

Drawing on the same sources as in question 10, the Science Council proposes the following:

- Flex off-the-job training rules for 24/7 lab environments to enable annualised or remote learning blocks without diluting quality.
- Support provider continuity and quality standards by creating a Provider Assurance Register endorsed by the Office of Life Sciences (OLS) with contingency funding for ‘teach out’ when providers exit, thereby enabling current in-programme apprentices to complete their apprenticeship. We

- recommend that multi-level provision funding is protected for Level 3-6 to allow layered progression and ongoing career development.
- For strategically important specialisms introducing funded top-up options or adopting an exceptions process managed by the OLS would mitigate the risks of an insufficient supply of specialists, following the phasing out of levy funding for level 7 apprenticeships.
- Implement and ensure Impact Assessments are completed before structural programme changes are made. This would mitigate the negative effect of training programmes being compressed or changed.
- We would encourage OLS to expand the promotion of apprenticeships to providers, supporting them to deliver programmes.
- Support Regional Life Sciences Skills and Innovation Hubs to bring together training providers, groups of employers, and translational research facilities. Provide shared HR, mentoring and levy-navigation guidance and services to support SME providers. Use the Hubs to simplify the process for employers to support apprenticeships, including programmes that rotate apprentices through a consortium of employers (such as a science park grouping) to broaden the apprenticeship experience. This would give hands-on experience of cutting-edge technologies, while lowering the barriers to SMEs offering apprenticeships.
- 81% of employers who responded to the 2024/25 Science Council survey said that closer links with relevant professional bodies (e.g. the Science Council community) to improve the alignment with professional standards and practice would be 'helpful' or 'extremely helpful' in supporting their engagement with apprenticeships.
- 80% of respondents said locality-based support with the administration of apprenticeships and T Level placements would be 'helpful' or extremely helpful'. SMEs were more likely than average (46% compared to 33% overall) to say this proposition would be 'extremely helpful'.
- Provide funding and facilitation for training providers, employer groups and professional bodies to collaborate on the development of a cadre of skilled educators with direct professional experience within the employment contexts related to science-based apprenticeships. The Science Council would welcome a formal role supporting Skills England's forthcoming review of life-science skills. Through our Technical Pathways Programme, we can map apprenticeship and T Level standards to the competency frameworks behind our professional registers to ensure every new or revised qualification aligns with recognised professional practice.

12. Do you currently transfer any of your apprenticeship levy contribution to other organisations, or do you receive transferred levy fund?

N/A

13. Have you taken on apprentices in the early stages of their career? If so, please describe any challenges or barriers you've faced in recruiting or supporting them.

Our members and employers report that they are taking on apprentices who are working in professions including estates, HR, finance, in laboratories, manufacturing, biotechnology, healthcare and data, to name a few. There are however, reported challenges competing with local industry on salary and visibility.

In addition, please refer to Question 10 answers.

EXISTING APPRENTICESHIP SUPPORT FOR EMPLOYEES DELIVERED BY TRAINING PROVIDERS AND OTHER ORGANISATIONS

14. Do you currently provide apprenticeship training?

N/A

15. Do you provide support specifically to Life Sciences companies to help them take on apprenticeships?

N/A

16. Are you aware that the government offers financial support and guidance to help SME's employee apprentices?

N/A

17. Are you aware of or have you received support from any apprenticeship support programmes such as the Advanced Therapies Apprenticeships Community (ATAC), Cogent Skills, or similar initiatives?

The Science Council through its members reaches around 320,000 people working in the sciences and regularly amplifies information on apprenticeships to our membership and employer network. We recently promoted information through our digital communication channels highlighting a Cogent Skills survey seeking the perspectives of apprentices.

18. Are you aware of any formal or informal networks within the Life Sciences sector that connect apprenticeship providers, training organisations, employers and other stakeholders?

Amplifying networks are critical to sharing learning, knowledge and opportunities. The Science Council convenes 30+ member bodies, an employer network and other stakeholder groups to signpost standards, providers and funding. We cascade information on our networks and out to our stakeholders so they in turn can share on their networks.

19. If your organisation currently has, or is considering taking on, apprentices – would you consider paying for external support to facilitate this process?

N/A

20. Would you be interested in delivering 'wrap-around' support services to help Life Sciences employers effectively recruit and retain apprenticeships?

While we would not consider delivering wrap-around services, we would be interested in undertaking commissioned work or projects to provide proof-of-concept to help solve identifiable problems.

21. For apprentices themselves – what form of additional support do you think would be most beneficial?

We work closely with our networks to secure feedback from apprentices.

We believe that the current professional registration pathway could be leveraged to support career development. Professional registration from Registered Technician to Registered Scientist to Chartered Scientist offers a built-in competence framework for career progression. OLS should promote dual apprenticeship and professional register pathways to ensure a high-quality, sustainable talent pool and pipeline.

As Life Sciences is a rapidly evolving field with innovative technologies and scientific methods it is creating emerging skills gaps. Remaining flexible to upskill or reskill could be answered by the introduction of shorter courses that are planned for introduction in 2026 while other (longer) technical education courses have time to adapt and build in the required learning as standard.

PRIORTY SKILLS NEEDS

22. What skills and capabilities do your organisation currently need training support for?

N/A

23. What skills and capabilities are you currently addressing through apprenticeships?

Apprenticeships are supporting the development of a skilled and highly qualified science workforce which will ultimately support the delivery of the Government's Modern Industrial Strategy. Apprenticeships give access to those for whom who traditional academic pathways into science are unattractive or inaccessible (for financial, family or individual reasons) by providing an opportunity to qualify in their chosen field of science.

Apprenticeships also result in apprentices making meaningful contributions to their employers' operations at an earlier stage than the traditional 'education/ training first, then work' routes. This submission demonstrates some examples of the wide range of professions and skills required and available through apprenticeship schemes (e.g. see response to question 9).

We are pleased to note in the newly published Life Sciences Sector Plan that companies could benefit from the £520 million Life-Sciences Innovation Manufacturing Fund for new manufacturing apprenticeships. We will work with relevant companies to feed directly into this investment to boost apprenticeship opportunities to support both regional growth and net-zero ambition.

24. What skills or capabilities would you like to develop through apprenticeships in the future?

Skills England and the Government's Modern Industrial Strategy clearly highlight that new technologies are revolutionising life sciences therefore investment in a sustainable pipeline is vital, particularly for employees who have Level 6 skills combining digital skills and traditional scientific skills at an advanced level. The following are three sector areas demonstrating evolving need as the context changes.

Life sciences face growing digital skills demands around artificial intelligence, data management and data analysis. A way of mitigating these areas is to fast-track approval of Level 4 Data/ML and Level 5 Digital Lab-Technician modules from existing bioscience standards.

For Regulatory Affairs expertise there is a requirement for global frameworks and strategy skills. We would recommend Level 3-6 feeder standards are explored (e.g. Regulatory Operations Technician).

On Business and cross-functional skills our stakeholders called for reinstating Level 4 Business Administration standard. We would recommend that Skills England re-establishes an updated life science contextualised business support apprenticeship.

25. Do existing apprenticeship standards adequately meet your organisation's training needs?

It is important for apprenticeships to champion diversity and inclusion to ensure a thriving science workforce. A ring-fenced levy for language support, mentoring and life skills would support this, alongside providing practical tools for employers to assess and monitor their progress on diversity and inclusion in apprenticeships. We would be keen to co-design with OLS a Diversity-in-Apprenticeships Accelerator, piloting ring-fenced levy 'equity credits' for language mentoring and life skills support, aligning with the new Life Sector Plan's cross-cutting focus on diversity and inclusion. The Science Council has considerable expertise collaborating with its members to encourage equity, diversity and inclusion in the science workforce. We have an EDI Progression Framework that our members use to improve diversity and inclusion practice which could be modified as necessary and made available.

Feedback from employers has also flagged that many standards can be too generic for research intensive environments. There can be a lack of flexibility in delivery or assessment, and we know apprentices find that these are underdeveloped for highly specialised roles. Collaborative work would be welcome to co-design apprenticeship standards for some areas of science work which reflect the research environment.

The Science Council would welcome an opportunity for a consultation meeting. We can provide case studies of apprentice to registrant journeys across academia, NHS, and industry. We would also be pleased to host a workshop with sector bodies to refine the digital-skills apprenticeship proposals.

Ends.