

Institute for Apprenticeships and Technical Education

Royal Society of Chemistry's response to the consultation on the outline content for the Science T-level

March 2019

Responses to questions relating to occupational specialisms were answered with regard to the Laboratory Science specialism.

(Rate on a 5-point scale:) The knowledge and skills in the core content will enable someone to develop a broad understanding relevant to the sector. Rating: 4

Comment

The content is broadly appropriate and the relevance to the occupational sector is clear.

As a general point, we advise reviewing the content bearing in mind the intended assessment methods, to ensure that it is clear what is expected in terms of depth of knowledge and how students should be able to apply the knowledge. As it is, some sections are open to interpretation in such a way that would skew the learning away from what is intended, and may lead to an assessment approach that is inappropriately academic. We further advise that employers, and professional bodies such as the Royal Society of Chemistry, be asked to review the Awarding Organisation specifications once they have been produced, to ensure that the interpretation at that stage remains appropriate.

An important example is the list of policies, regulations and practices that students will be expected to have an awareness of. We agree with the principle of including this content, but students must not be asked to learn policy and regulation documents off by heart and answer detailed questions about them in an examination. We do not su

that the Core knowledge and understanding will be assessed by exam; understanding of regulations and practices would be better assessed through the employer-set project, where students could demonstrate an awareness relevant policies in how they meet the brief.

metals. While relevant, it is unclear why metals are given this prominence above other types of structure, e.g. polymers and ceramics. Additionally, we advocate including the relationship between structure and properties of composite materials.

A scientific concept missing in the Core, which would be relevant to all Health and Science occupations, is an understanding of toxicity and its relationship to the type of substance, the dose and individual sensitivity.

Use of SI units would be relevant to include in Health and Science route Core, rather than confined to the Science pathway Core. In a broad range of medical occupations an understanding of a range of units and a sense of scale is essential; for example in understanding appropriate ranges for concentrations and dosage.

In the section on the Science sector (page 11), it is good to see reference to the diversity of the sectors, as well as application to non-science sectors. Additionally, we would be keen to see reference to the fact that science inherently involves innovation and the development of new ideas, and how the sector contributes to that.

We take this opportunity to signal that, among the people we spoke to in preparing this response there was some confusion about the structure of the T level programmes as presented in the consultation document:

qualification would cover Health and Science or Science only; this will need to be made very clear in tendering, but also in communications to stakeholder groups. It would also be advisable to

(page 18).

Several people interpreted the employer-set project as being related to the industry placement. Again, it will need to be made clear in all communications that these are two separate entities.

(Rate on a 5-point scale:) The content for the occupational specialism(s) contain the right knowledge and skills to allow someone to gain employment within that specialism. Rating: 4

Comment

It is appropriate that this contains both scientific tasks and skills, and scientific knowledge, and the