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UTC Partnering Opportunity for Data Centres

Q&A from follow up session, 13 January 2021

Mike Halliday summarised the partnership opportunity and the commitment needed from industry partners. £12K a year to finance the project, 42 days per partner organisation for oversight, engagement with students, project and curriculum design, student recruitment and marketing. These days would be split between about half a dozen individuals within each partnering company.

In return, the sector would have the opportunity to design data centre specific educational content for around 150 students a year, to engage directly with those students to build rapport, deliver project-based learning and develop a bespoke, long term pipeline of talent for apprenticeship or entry level into the data centre workplace.

What is meant by project based learning?

Project based learning enables students to work as a team to focus on very specific technical aspects of industry. Project specifications are very short and are developed by partners. Projects do not have to be complex but they do have to be meaningful and relevant to the business environment. Project based learning is classroom based (or delivered virtually under lockdown).

In a data centre environment, projects would relate to design, build or operation of a data centre and may focus on challenges like providing emergency power supply.

How many projects are partners expected to lead?

It is anticipated that each partner will lead one or more projects a year, designing, developing and subsequently refining the content.

Will this change year on year?

The biggest learning curve will be in the first year so it makes sense for partners to stick with their projects and refine them over time. This allows them to develop expertise and ensures consistency, as well as being a more efficient use of resource. The most likely reason for change would be updates to the BTEC curriculum.

How can partners ensure that the UTCs attract high calibre students?

The UTCs currently compete against mainstream education provision, and secondary schools are not keen to advertise UTCs internally. Partners will need to help market the opportunity and position the sector as a career destination of choice.

What about work placements?

The UTC understands that there may be constraints on work placements in secure environments, but if small group work placements, say 5 student placements at a time, can be facilitated then so much the better. The UTC requirement for student work placement time is a fraction of, and more flexible than, that for T Levels, which is around 40 days. It is important to note that work placements provide employers to develop skills, build relationships with students, and as a result have the most significant influence on a student's career aspirations.

Does completing a UTC course give students a head start on apprenticeships?

Students that benefit from employer engagement are not only more aware of careers but have also developed character, attributes and traits that provide them with an advantage when applying for apprenticeships. Their experience in project-based learning, combined with relevant and challenging work placements make them more attractive candidates for employers. A significant number of those leaving UTCs move straight to apprenticeships, with 60%+ entering level 4 or Degree apprenticeships. Some engineering environments will still require a level 3 apprenticeship to be completed first but this is the prerogative of the employer. So it depends on what is needed. NB: CNet Training is currently working on a level 3 Data Centre Technician apprenticeship. Some employers are developing their own unfunded apprenticeship programmes.

What are the courses based on?

The BTEC Engineering courses provided at UTC Heathrow are formed of units which will be selected by the data centre partners to complement the knowledge and skills most relevant to the working environment. The full specification is available here (list of units starts on page 20 of the document). BTEC is a technical qualification that is equivalent to A levels. Students learn in a practical environment, submitting assignments and sitting exams to demonstrate their practical application of skills and knowledge learned. The UTC already has high quality engineering facilities. The objective is to select the best BTEC units to shape young people to be a good fit for the data centre environment.

Students could do a single, double, or triple engineering BTEC, equivalent to one, two, or three A levels. Alternatively, they could combine an engineering BTEC with an IT BTEC, or combine BTECs and A Levels.

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Useful links

techUK Topic Page: https://www.techuk.org/resource/tackling-long-term-data-centre-skills-shortages.html

University Technical Colleges: https://www.utcolleges.org/

CNet Training: https://www.cnet-training.com/

Tech Partnership Degrees: https://www.tpdegrees.com/

techUK Skills and professionalism group: https://www.techuk.org/data-centres-programme/datacentre-professionalism-steering-group.html