

Engineering

Engineering: Digital Engineering Technician Level 3 Apprenticeship

In Brief

Start Date / Duration

This apprenticeship programme can be started at any time and can run for up to 36 months

Entry Requirements

The typical entry requirements for this Apprenticeship will be five GCSEs or equivalent, including Maths and English; or a Level 2 Apprenticeship. Employers have their own specific entry requirements.

You will achieve

The following qualifications will be gained:

- English and Maths will be required to be demonstrated at Level 2;
- BTEC Level 3 Construction and the Built Environment;
- NVQ Level 3 Diploma in Built Environment Design.

Course Overview

The role is to produce detailed solutions to achieve the optimum performance of built environment projects via digital models and presentations using software, sketches and electronic visualisations. The apprentices will typically support Digital Engineers or other functional specialists in completing complex tasks using digital engineering techniques, specifically:

- Virtualisation and simulation of design, construction and management of assets
- Digital measurement of design, production and management of assets
- Communication of complex engineering principles to stakeholders digitally
- Integration of construction data and information throughout the whole life cycle of the asset
- Adherence to the standards and regulation of digital information

This Apprenticeship will include the knowledge, skills and behaviours required to achieve Technician/Associate status through the following professional institutions. The professional review process is included in the assessment process for this Apprenticeship. The options are:

- Associate Construction Manager (ACIOB) – The Chartered Institute of Building
- Civil Engineering Technician (EngTech TMICE)- The Institution of Civil Engineers
- Technician Surveyor (AssocRICS)- The Royal Institution of Chartered Surveyors

- Building Services Engineering Technician (EngTech LCIBSE) – The Chartered Institution of Building Services Engineers
- Associate Technician (AIET) – The Institution of Engineering and Technology
- Professionally Qualified Architectural Technician (TCIAT) – Chartered Institute of Architectural Technologists

For more information regarding the apprenticeship standard, please click here [<https://www.instituteforapprenticeships.org/apprenticeship-standards/digital-engineering-technician/>]

Course Content

Learners will need to show competence in the following areas;

Health and Safety: Aware of Health and Safety (H&S) industry regulations and moral, legal and financial implications of poor H&S performance. Know how to identify basic H&S outputs digitally.

Sustainability Understand the sustainability issues in projects across economic, social, legal and environmental aspects.

Engineering: Know how engineering principles, codes and standards work in the built environment and the purpose of them. Understand various management principles and the project management lifecycle – specifications, methods and materials.

Commercial & Financial: Aware of principles of the commercial procedures and reporting on all stages of construction project and an appreciation of commercial risk. Aware of financial and legal obligations and constraints for all stakeholders in construction projects, and understanding of quantification and costing within a digital environment.

Design Understand how proposals for design briefs, recommendations, programmes and detailed designs are prepared. Aware of the purpose of the digital environment and its role in design management. Understanding of different disciplines and their role in coordination of design.

Technology & Innovation Aware of the appropriate application of technology and the human to technology interfaces. Understanding the impact of sensory networks and the internet of things.

Planning Understand the importance of project planning and resourcing and be able to analyse different digital engineering (DE) techniques, such as simulation of construction logistics and progress.

Quality Understand how to identify the level of quality required delivering a built asset throughout the lifecycle.

Construction Industry and Sectors Aware of the structure of the construction industry and its respective sectors. Understanding of the institutions and how the construction industry serves the economy as a whole.

Customer Care Awareness of DE objectives set by Clients and Employers.

Maintain and Operate: Aware of the information interdependencies of delivering information throughout a product / asset lifecycle. Understanding the purpose of information standards and regulation.

Knowledge Sharing: Awareness of social networking and appropriate sources of information / knowledge sharing. Understanding basic research techniques to ensure integrity of knowledge discovery.

How will I be assessed?

You will be assessed by assignments, on-line tests and workplace observation. There will be an end point assessment for this apprenticeship

What Equipment Will I Need?

All equipment will be provided

Where will I study?

What can I do next?

Progression from the Level 3 Apprenticeship could lead to Construction Design Manager, Construction Quantity Surveyor, Construction Site Manager, and Civil Engineering Site Manager. This standard has been designed to deliver sufficient competence, underpinning knowledge and understanding in the identified job role to allow apprentices to meet the requirements of the Construction Skills Certification Scheme (CSCS) or other industry affiliated schemes.

How much does the course cost?

There is no cost to being an apprentice. All costs associated with your apprenticeship, including the cost of training and your salary, will be paid by your employer.

Financial support

You may be eligible for assistance with expenses such as travel, books, equipment and childcare. For further information please contact the Student Services Team on +44 (0)1226 216 114.

Extra information

Contact the Apprenticeship Team

For further information please contact the team on +44 (0)1226 216 123 or email: info@barnsley.ac.uk [mailto:info@barnsley.ac.uk]

Want to join Barnsley Sports Academy and the Sports Village?

Barnsley College has a range of sports opportunities for all students to take part in, gain professional training and compete nationally and internationally. We also have a state-of-the-art fitness village, Honeywell Sports Village [<https://www.barnsley.ac.uk/shops-services/honeywell->

sports-village/] where students can make use of our fitness suite, spinning studio and classes for competitive rates. You don't have to be studying sport to get involved in the Sports Academy [<https://www.barnsley.ac.uk/our-departments/sport/sports-academy/>].

Additional Learning Support

Our Additional Learning Support team can provide you with the support you need. Please contact them on +44 (0)1226 216 769.

Disclaimer

Please note we reserve the right to change details without notice. We apologise for any inconvenience this may cause.

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Want to apply?

Visit <https://www.barnsley.ac.uk/apply> to get started

Call us on **01226 216 123**