

Digital Built Environment

Level 3 Construction and Design Engineer Construct

This course includes:

Level 3 TQUK Diploma in Design Engineer Construct (equivalent to 1 A Level)

Level 3 BTEC Diploma in Construction & the Built Environment (equivalent to 2 A Levels)

Why study this course at Cronton Sixth Form?

You will be studying at the national “Centre of Excellence” for the Design Engineer Construct! qualification. This industry-written element of the course is designed to support students in exploring a wide range of professions in the built environment; from Architecture and Surveying to Structural Engineering and Facilities Management.

Learners will develop their understanding of career opportunities in the sector and will benefit from regular trips and site visits, workshops and careers support from our industry partners.

This course is designed to allow you to develop higher level skills needed to progress to university or employment at a technical or professional level within the property & construction industry. You will have access to state-of-the-art digital technology, which will underpin all of your learning on the course and be taught by an award winning digital built environment team.

What is this course about?

In Design Engineer Construct, you will have the opportunity to design and develop your own sustainable building, in response to a live employer brief. You will play the role of an architect, land surveyor and architectural technologist whilst developing your design. You will work closely with industry experts to ensure that you are meeting regulations and achieving sustainability expectations in modern professional construction. This project often results in an impressive portfolio of your capability and skills in architecture, digital engineering and technical aspects and lends itself well to “the next steps,” such as university or employment interviews.

On your BTEC, you will study construction principles in maths, materials and human comfort, along with core built environment units, such as construction technology and construction design. You will also gain fundamental skills, which

are essential to successful progression into the digital built environment; in health & safety, surveying and legislation. In your second year, you will get the opportunity to complete graphical detailing and building information modelling (BIM) units and you will get the opportunity to complete a specialist project in offsite manufacturing; the cutting edge of construction technology.

How will I be assessed?

The majority of your Design Engineer Construct qualification will be assessed through a coursework portfolio around your Sustainable Construction Project. You will also be externally assessed by a DEC Principles exam in January of Year 2.

The majority of BTEC modules are internally assessed coursework, over the two years. There are 2 further external assessments; Construction Principles and Construction Design.

Centre of Excellence in STEM

These courses will be delivered in our new IDEA centre which in addition to high quality teaching rooms also boasts state of the art electronics and metrology labs, with manufacturing workshops to provide hands-on training and development in Robotics, Pneumatics and Hydraulics, Microelectronics, and engineering applications.

Cronton Sixth Form is a Design Engineer Construct! (DEC) Centre of Excellence and National Training Centre

Be inspired

The College works closely with local industry to enable valuable work experience placements which will enhance your appreciation of the global world of engineering.



Entry Requirements

A minimum of 5 GCSEs at Grade 9 – 4 including a Grade 5 in Maths, a Grade 4 in English Language and a Grade 4 in Science.

Enrichment Opportunities

During your time at Cronton Sixth Form College, you will have the opportunity to take part in a number of different enrichment activities in your free time. These will increase your enjoyment of your studies and equip you for further success.

Students will have opportunities throughout the course to engage with enrichment activities led by the built environment tutors, industry partners and educational establishments.

The friendly and supportive team of staff in the IDEA Centre are continually finding ways for our Engineering and Built Environment students to engage with enrichment activities. These have included celebration of seasonal events, charity fundraisers and professional presentation evenings. There are also many opportunities to join us on international trips; to San Francisco, Berlin and Cern in Switzerland.

Students interested in progression on to Architecture, Interior Architecture or Landscape Architecture will have access to support sessions aimed at generating a professional portfolio; desirable to universities and employers in these fields.

Female Engineers and Built Environment students are encouraged to join our Women in STEM club, run by female tutors in the IDEA Centre. Learners will have the opportunity to meet and network with likeminded students, as well as further trips and visits and opportunities. The Women in STEM team frequently enter competitions and complete cross curricular projects, as well as focussing on encouraging the next generation of female learners onto STEM courses.

What can this course lead on to?

The course is designed to allow students to progress to further study at university including foundation degrees, BEng, MEng or BSc. There are an increasing number of opportunities for students to secure Higher or Degree Apprenticeships, in Project or Site Management, for example. Alternatively, you could progress directly into employment in the built environment for example as a Digital Engineer or a trainee surveyor.

What have previous students said about this subject?

“There has been some amazing trips that we have had the opportunity to go on, such as the Inspire Summit in Manchester celebrating women in STEM, UK Construction week in Birmingham assisting George Clarke on his stand helping visitors with the software. A further trip has helped me secure work experience.”

Outstanding Facilities

The IDEA Centre is a unique STEM facility which offers students innovative training facilities including an advanced manufacturing workshop, a digital and electronics suite, a metrology suite, a process control workshop, a health and fitness suite, a project management suite, meeting rooms, a 3D modelling suite and an Industry 4.0 suite which all prepare students for the Industry 4.0 trend of automation and data exchange in manufacturing technologies.



Meet the Students

Name:
Freya Corkhill Cantwell

Previously from:
Wade Deacon High School

Destination:
Project Management Degree Apprenticeship

Vocational Results:
Digital Built Environment Level 3 Construction and Design Engineer Construct

Distinction* Distinction* A

“I chose Cronton because they offered this particular course, and the industry links the college has in the engineering industry. They also offer good trips and the opportunity to carry out great work experience.”

