Level 2

Professional Engineering & Digital Built Environment

This course includes:
Level 2 BTEC Certificate in Engineering
Level 2 Certificate in Design Engineer Construct

Why study this course at Cronton Sixth Form?

If you are passionate about opportunities in Engineering or the Built Environment, this course is for you. This course is an ideal start for students looking to work towards careers in Engineering or Professional Construction.

Students will be introduced to Computer Aided Design and Manufacture and Engineering Design, alongside developing mathematical, mechanical and electrical skills in Engineering.

They will also have the opportunity to manage their own construction project playing every role from Architect to Land Surveyor and Structural Engineer-in their construction qualification.

What is this course about?

On this course, learners will complete two qualifications on this one year course; one in Engineering and one in Construction. Together, these qualifications will allow students to explore careers and progression opportunities across Professional Engineering and Professional Construction. The skills and knowledge that students will develop across both the Engineering and Construction sectors are similar and will support progression onto either pathway at Level 3.

In Design Engineer Construction, you will have the opportunity to run your own construction project from start to finish. You will receive your employer brief at the start of the course and design your own sustainable building for the client. Throughout the design process, you will benefit from input from experts and industry employers to support decisions you have made and justify your final building outcome. You will gain significant digital design skills over the one year course through the use of industry standard software, such as Autodesk Revit.

Your Engineering learning will cover a wide range of Engineering skills and knowledge needed for studying Engineering at Level 3 and beyond. You will complement your construction design skills with Computer Aided Engineering; computer based design and manufacturing, using Autodesk Inventor. You will also use computer software to generate and use Engineering Drawings and complete a full Engineering Product Design project. Learners will also explore scientific methodologies in Electrical and Mechanical units, support by an Engineering Maths unit.

How will I be assessed?

The majority of your Design Engineer Construction qualification will be assessed through a coursework portfolio. This will be your own construction design project, in response to a client brief. You will also sit an external examination at the end of the one year course.

Your BTEC Engineering qualification is mostly assessed through coursework assignments. You will complete two external examinations alongside your coursework. One examination covers Engineering Industry, materials and sustainability. The second exam tests your understanding of Engineering drawings and information used in an Engineering organisation.

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

4 x GCSEs grade 9 - 3 including Science and English Language and a grade 4 in Maths.

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 to 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?

Students from this course are likely to progress onto Level 3 Professional Engineering or Level 3 Digital Built Environment courses.

Students may also be interested in progression on to Level 3 Apprenticeship opportunities in Engineering Design, Computer Aided Design and the Digital Built Environment.

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.

CRONTON SIXTHFORM COLLEGE

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