

A Level

Design & Technology (Design Engineering)

Why study this course at Cronton Sixth Form?

Engineers are at the forefront of technological advancements and are constantly working to develop new and innovative solutions to the world's challenges. You will have access to our outstanding 'IDEA Centre' which houses cutting edge Engineering facilities including an advanced manufacturing workshop, metallurgy and electronics laboratories and state-of-the-art computer aided design suites.

What will I study?

This qualification will support a solid foundation in mathematics, physics, and other sciences, it will help you develop critical thinking skills, problem-solving abilities, and creativity, all of which are highly valued by many industries, including aerospace, telecommunications, electronics, and automotive. You will study CAD, Electronics, Mechanics, Materials, Project Manufacturing and Management that are current with engineering applications and innovations. This will allow students to continue their studies in engineering, including professional courses such as BEng and MEng degrees.

How will I be assessed?

You will be assessed by 50% project and 50% exams.

Entry Requirements?

A minimum of 3 x 5's and 2 x 4's at GCSE including a Grade 6 in Maths and a Grade 6 in Physics or a Grade 6-6 in Trilogy Science. Plus a Grade 5 in English Language. Students will often choose this course alongside Maths and Physics A Levels.

Can I study this course if I have not taken it at GCSE?

As a core subject, all students will be expected to have studied Physics or Science at GCSE level.

Enrichment Opportunities

Students are strongly encouraged to be part of our exciting enrichment activities. Tomorrow's Scientists offers their own individual research projects into any aspect of science, culminating in an annual presentation on their work. There are university and industry visits and Nuffield placements. We also have opportunities to visit Jodrell Bank (to explore radio astronomy), The National Space Centre (to explore the many careers in the UK Space Industry) and CERN in Switzerland (to explore particle physics and cosmology).



Centre of Excellence in STEM

Cronton Sixth Form College has created a Centre of Excellence for Advanced Level Science, Technology, Engineering and Maths courses. This Centre of Excellence has been developed through the recruitment of some of the best teaching staff in the country, the building of our new state of the art IDEA Centre and science labs, and the expansion of our extra-curricular activities that support applications to the most prestigious universities.

Be Inspired

Students can take part in our Tomorrow's Scientists Professional Studies Programme, enter competitions, be part of prestigious national Science and Maths programmes, be inspired by leading industry experts and visit external research labs and top universities such as Cambridge, Oxford and Manchester.

The Cronton Experience

At Cronton you can take part in many enrichment activities such as:

- The High Achievers Programme
- Professional Programmes for Tomorrow's Scientists, Lawyers and Teachers
- Centres of Excellence in STEM, Performing Arts and Sport
- Student Leadership Team
- College Sports Teams
- TASS (Talented Athlete Scholarship Scheme)
- The Duke of Edinburgh's Award
- International Trips
- Scholarships



Learn more about the Cronton Experience at:
www.cronton.ac.uk/experience

What can this course lead on to?

You could progress to a degree in physics, astronomy, engineering, geophysics, medical physics or many other exciting possibilities. This opens up a world of fascinating careers, including being a medical physicist, astrophysicist, actuary, aeronautical engineer, or a civil, electrical or mechanical engineer. Physicists are also some of the best paid professionals. For example, in a recent survey, more than half of the highest paying graduate jobs required A level physics.

Any additional costs?

All teaching resources are available on the college intranet. Student notes and work booklets will be given to all students. There is a one-off payment of £10 for Physics at the start of the year which covers the cost of a trip, guest speakers and resources.

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.

What have previous students said about this subject?

“Studying this subject, you will cover theories that you haven’t heard of before, which makes the lessons interesting. Each topic has practical elements, which really helps your understanding before moving on. I also studied the Prestigious Universities Programme, which involved me securing a place on an internship in a major company. This has really helped me when applying to University.”

Meet the Students

Name:

Bethany Robertson

Previously from:

St Augustine of Canterbury Catholic Academy

Destination:

Durham University to study Physics

A Level Results:

Biology A

Maths A

Physics A

