Exam Board

Our Level 3 Cambridge Technical Extended Certificate in Engineering are examined by the OCR awarding body.

Units

This two year course is split over six units of which three are taught in the 1st year and three are taught in the 2nd year.

In the 1st year of the course you will complete the following units.

- Maths for Engineers will extend your understanding of Mathematics beyond GCSE and will show you how to use algebra, trigonometry and calculus to solve relevant engineering problems. This unit is externally assessed by an OCR set and marked examination.
- Science for Engineers will build on your Physics ability and then help you understand fundamental principles of mechanical, electrical and electronic engineering. This unit is externally assessed by an OCR set and marked examination.
- Computer aided design which is used across all fields of engineering and will allow you to understand, read and produce engineering drawings. This unit is internally assessed with assignment based work

In the 2nd year of the course you will complete three of the following units.

- Principles of mechanical engineering this unit will expand on the Maths and Science units from the 1st year by developing understanding of forces, pulleys, gearing and properties of beams. This unit is externally assessed by an OCR set and marked examination.
- Principles of electrical and electronic engineering goes into greater detail of electrical principles. It is a vital unit for all engineering disciplines and covers topics like voltage and current and also analogue and digital electronics. This unit is externally assessed by an OCR set and marked examination.
- Material science will develop an understanding in material properties and their processing techniques. It will also cover applications and uses of modern and smart materials. This unit is internally assessed with assignment based work.
- Business for Engineering looks at how engineering businesses of all sizes survive, develop and manage in the modern age. It will allow you to develop an understanding of financial planning techniques in an engineering context. This unit is internally assessed with assignment based work.

How is this course delivered?

The engineering lesson will be taught in different areas of the college depending on the unit and all lessons will be relevant to engineering scenarios.

Due to each engineering unit requiring different specialist teachers you will always have a teacher who is an expert in their subject area. Lessons will include a variety of group, paired and individual work.

Resources you will draw on include text books, exam questions and web-sites.

Departmental Enrichment

The Engineering Department will offer a number of enrichment activities:

- Visiting speakers from both industry and universities;
- University visits to look at different fields of engineering; and
- Industry company visits.

Where can this course take me?

Students can go on to a wide variety of university courses and careers from their Engineering course. Some examples include;

- Electrical Engineering at York
- Aeronautical Engineering at Loughborough University
- Mechanical Engineering at Newcastle University.