

COWLEY

SIXTH FORM COLLEGE

BTEC LEVEL 3 NATIONAL FOUNDATION DIPLOMA

ENGINEERING

Overview

In Year 12, you will study a range of practical units. You will learn about 2D and 3D design using a range of CAD packages including Autodesk Inventor and AutoCADLT as well as learning to create schematic drawings of electrical circuits to British Standards.

Students will gain knowledge and understanding of Computer Aided Design, Computer Aided Manufacture, Electronic Principles and Health and Safety. You will learn to apply mathematical and physical science principles to solve electrical, electronic and mechanical based engineering challenges.

You will use secondary processing to develop your machining techniques in the workshop to be able to manufacture a batch of products as part of a team. You will complete a work experience placement within the Engineering sector which will involve a portfolio of work to plan, document and evaluate your work experience.

In Year 13, you will Learn about Material Properties, Product Design and Additive Manufacturing Processes. Students will explore engineering product design and manufacturing processes, completing activities that consider function, sustainability materials and the design of every day products.

You will take part in a range of practically guided tutorial sessions to develop 3D models and test their assembly using 3D printing and develop and test electronic circuits. You will also produce a range of 2D and 3D Engineering drawings using a range of CAD Software.

Students will also gain an understanding of applied commercial and quality principles in Engineering. You will be taught by an enthusiastic and caring team who are committed to ensuring you achieve and reach your potential. We are always developing and improving upon the work we do to keep the course fresh and exciting.

What to expect during lessons

In the engineering environment, we encourage students to work systematically to develop their problem solving skills. Lessons will be in the form of class tutorial sessions as well as focused

Equipment that you will need

Technical drawing set which includes:
60/30 degree set square, 45 degree set square, compass, ruler, drawing pencils, circle/ellipse template.



I have enjoyed using the 3D CAD software, Fusion 360, as well as creating hand-drawn engineering drawings. I also enjoyed the electricity part of the course because it involved lots of practicals.



Progression

Many students choose a variety of paths depending on their ambitions and aspirations.

The majority of students usually progress to careers within manufacturing, structural or mechanical engineering, automotive engineering or electrical engineering.