

Design and Technology Engineering Tech Level Double Award(2 A level equivalent) 'Design Engineering and Materials Technology'

What is a Tech Level?

Advanced (Level 3) Technical qualifications are on a par with A-levels. They are for learners over the age of 16 who wish to specialise or progress into a specific sector or occupational group, through advanced/higher apprenticeships, further study or employment. This course seeks to develop your knowledge, understanding and skills required in industry. You will have the opportunity to use a wide range of materials and manufacturing process. These can include traditional methods of manufacture such as joinery, welding, lamination and fabrication to modern methods including computer aided manufacture with milling and laser cutting machines.

Why study a Tech Level?

To provide you with an exciting and practical course that enables you to produce high quality products. During lessons, you will develop skills in CAD designing, practical application, manufacturing techniques and problem solving. You will be utilising knowledge from other subjects and you are encouraged to work outside the classroom to get a feel for real life situations and contexts.

What makes a successful Tech Level student?

An interest in design, practical work, the use of ICT and a passion for improving products used in society. The ability to work independently, effectively in a team with passion drive and determination.

To study this course, what qualifications will I need and in which subjects?

A minimum of 5 GCSE grade 4 subjects including English (Lit or Lang) and Maths at Grade 5. It is desirable that the applicant has a grade 4 or above in GCSE Resistant Materials or Level 2 merit in BTEC Construction or Engineering. If you have a passion for Design and Technology and Engineering but did not study these courses at GCSE or BTEC you will be considered after discussion with teachers. This course compliments Maths, Science, Physics, Business studies and creative subjects.

What is the structure of the course?

Year 12 Units	Year 13 Units
Unit 2 – Mechanical Systems (Set Task) Unit 4 – Engineering Design (CAD) Unit 5 – Production and Manufacturing	Unit 3 – Mathematics for Engineering (Exam - delivered by the maths department) Unit 6 - Design Visualisation (3D CAD)
Assessment - centre assessed /externally quality assured	Unit 7 - Advanced Design for Manufacture
Unit 1 – Materials Technology and Science	Unit 8 – Design Engineer project management (Work experience linked)
Assessment - Externally assessed examination (1hr 45mins)	Assessment - centre assessed /externally quality assured Percentage of overall qualification = 25% (90 GLH)

What opportunities are there for me to study beyond the classroom?

You will be expected to be working on actual client briefs, working with local Engineering companies.

What kind of career does this subject/qualification prepare me for?

You will learn problem solving and practical skills beneficial to any job or career you may decide to follow. More specific pathways can include: Industrial Product Design / Engineering / Technician & Maintenance / Civil Engineering / 3 Dimensional Design / Constructional Engineering / Surveying / Interior Design / Architecture / Building Control / Design and Marketing / Product Development / Pathways to Teaching and Lecturing.