

Employability

This course is a great entry level course to the large range of Engineering careers that are out there. Here are some of them

- Mechanical Engineer
- Manufacturing Engineer
- Civil Engineer
- Software Engineer
- Environmental Engineer
- Agricultural Engineer
- Aerospace Engineer
- Automotive Engineer

Where there are two projects in a term these projects run parallel with two different teachers. One focus is on the development of practical skills the other on theory knowledge. When Students are completing Controlled assessment for Unit 1 both teachers teach this in conjunction with each other.

Employer Engagement



This represents the areas of your course that will enable you to 'Get Ahead' by working with our partners.

Intervention



Before & after school intervention for additional 1-1 support throughout your studies

Summer:
Enrolment on to
BTEC Engineering
or apprenticeship.

Spring Term

Project 8
Unit 2

THEME
Children's
Play Areas



Summer Term

Unit 3 Exam
Revision

Unit 3 Learning.

The majority of learning for unit 3 is completed through practical modeling and make projects. This allows students to understand the issues at hand in a practical way which helps them to understand through problem solving and application of ideas. Students consolidate this knowledge with regular questioning that occurs in lesson, regular mini assessments as well as mock exams. Unit 3 knowledge is also taught consistently through out the course through all other units. Here are some of the main mini projects we do to help embedded this knowledge

- Project 5 – Unit 3 EXAM Mini Project 1 – Bicycles. This project focuses of structural design.
- Project 6 – Unit 3 EXAM Mini Project – Theme Park Rides. This project focuses on the mechanical development of theme park rides.
- Project 8 – Unit 3 EXAM Mini Project – Children's Play Areas. This project focuses on structures, safety aspects of designing as well as materials, environmental issues such as sustainability
- Project 9 – Unit 3 EXAM Knowledge – New technologies, smart materials, environmental issues, engineering achievements

Unit 3 Exam Revision

Students spend the summer term leading up to exams recapping on prior knowledge in the form of past papers in preparation for their final unit 3 exam

THEME
Theme
Park
Rides



Project 7
Unit 3 EXAM
Mini project 2

THEME
Bike
Clamp
redesign
brief

Project 6
Unit 2
Designing
Engineering
Products

Autumn Term

YEAR 11



THEME
Bicycles

Project 5
Unit 3 EXAM
Mini project 1

Project 6 – Unit 2 Designing Engineering Products – CONTROLLED ASSESSMENT

Students follow a give assignment brief from the exam board which changes each year. For unit 2 this is based on the same product designed for unit 1. Students are given a problem to redesign. Students spend time researching similar products, creating a specification and redesigning by producing sketches and final models drawn on CAD to solve the problem given.

Project 3 – Unit 1 Manufacturing Engineering Products – CONTROLLED ASSESSMENT

Students follow a given assignment brief from the exam board which changes each year. The brief asks students to follow given technical drawings to manufacture a product accurately to the measurements made. Completing a eportfolio of work showing how to plan manufacture and record how to make the given product.

Project 4 – Unit 2 Preparation

In preparation for Unit 2 in Year 11 students complete mini tasks such as how to redesign products, how to sketch and learn how to use CAD programmes such as 2D Design, TinkerCAD and Fusion.



THEME
Fusion 360/
Drawing
skills

Spring Term

Project 3
Unit 1
Manufacturing
Engineering
Products

Controlled
Assessment
Unit 1 –
Bike Clamp

Summer Term

Project 4
Unit 2
Preparation

Controlled
Assessment
Unit 1 –
Bike Clamp



Project 2 – Unit 1/Unit 3 Understanding Working Drawings

This theory based unit introduces students to the basics of working technical drawings. Students learn to read working drawings, understanding the information on them, and how to construct the orthographic style of drawing used to construct a technical drawing. Students also learn about the relationship between isometric and orthographic to help construct these drawings.

Project 1 – Unit 1/Unit 3 AFL Task

This practical based project introduces students to the basic principles of engineering manufacture through understanding working drawings, hand tools and mechanical machinery of the workshop. The knowledge learnt also supports their Unit 3 Exam knowledge as well as a preparation project to Unit 1 Manufacturing engineering principles

Your two-year journey starts here...

You will enrol onto the course in Year 10 and complete your GCSE course in Year 11.

Theme
Working
drawings

Project 2
Unit 1/Unit 3
Understanding
Working
Drawings



THEME
Tool
Box

Project 1
Unit 1/Unit 3
AFL Task

Autumn Term

YEAR 10

