



BTEC Engineering

(A Level equivalent)

Applicant Study Pack



SUCCESS

- **Skills needed for the course**

The skills required for this course include:

- Planning and organising skills
- Critical thinking & Problem-solving skills
- verbal and written communication skills
- teamworking skills
- IT skills
- Maths skills
- time management skills
- Creativity
- Curiosity and imagination
- Adaptive Thinking
- Inquiry Skills
- Confidence

- **Interests desired**

Engineering is a scientific field that takes our scientific understanding of the natural world and using it to invent, design, and build things and achieve practical goals, so if you decided to study engineering it is crucial to have an interest in maths and science. Developing an effective critical thinking and problem-solving techniques are also essential for this course, as this course is also revolving around solving problems and exploring how things work every day. In this course you will be provided with the required knowledge, which will enable you to improve your skills and enhance your career prospects.

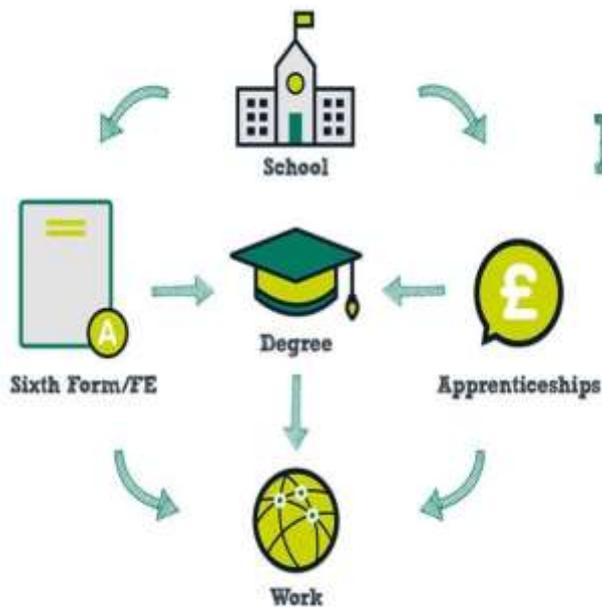
- **Course outline**

- **Equipment needed** ➤ Pen, pencil, rule & rubber.
- Highlighters
- A4 pad of lined paper.
- A4 lever arch file.
- Scientific Calculator.
- A 32GB USB pen drive is recommended.
- diary/personal organiser

- **Skills that they should be developing now**

- Communication Skills
- Organisation skills

- Time management skills
- Teamworking skills
- Problem solving skills
- Numerical skills
- Confidence
- **Any photographs or information required**



**How to
become an
engineer**

**Tomorrow's
Engineers**

Mathematical Questions

- 1) Write the following as a single power

$$2 \quad 1.6 \quad -1.1 \quad -2.4 \quad D \times D \times D$$

$$\times D$$

$$5.8 \quad -2.1$$

$$D \times D \times D$$

- 2) Remove the brackets and simplify

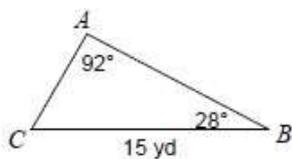
➤ $(x + 5)(x + 1)$

- 3) A flywheel is rotating at 3000 rev/min. Determine its angular velocity?
 4) Convert the following angles to degrees, minutes and seconds correct to the nearest second.

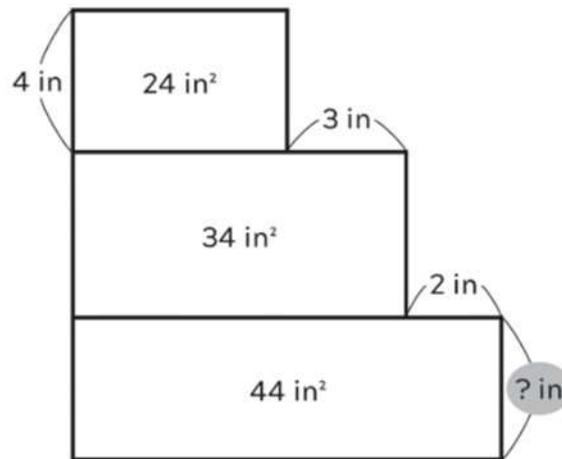
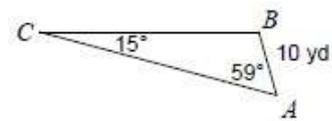
- a) 0.1732 rads b) 1.5632 rads c) 0.0783 rads

5) Find the length of the sides of the rectangular?

1) Find AC



2) Find BC



6) Solve the simultaneous equation below

$$\begin{aligned} 5x+3y &= 8 \\ x+3y &= -2 \end{aligned}$$

7) Find the lengths of the sides in the triangles

8) Solve the Quadratic Equations by Formula

➤ $3x^2 - 7x + 2 = 0$

➤ $xx^2 + xx - 72 = 0$

Call to action

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Attend our New Students Day.

Join us for enrolment in August. Letters will be sent to all applicants at the end of July with more details.

