

# Engineering



The BTEC level 3 engineering course is designed to enable students to experience a wide range of disciplines they would expect to experience within the engineering sector. Students will acquire new knowledge and skills that will provide a natural transition onto either an engineering degree, apprenticeship or degree apprenticeship.

Scan for Specification

## BEFORE YOU START

- Key revision guide: Pearson REVISE BTEC National Engineering revision guide
- ISBN: 978-1292150284
- Equipment Required: Scientific calculator, pens, pencils, highlighters & a folder with dividers
- Useful Apps: Physics Toolbox Sensor Suite

Using key vocabulary is vital at A level. Research the following key terms for the 1<sup>st</sup> topic and create a glossary.

- Coplanar Forces
- Stress
- Strain
- Kirchhoff's Laws
- Rectification
- Transformers
- Resistance
- Impedance

Create this glossary electronically so you can add or amend easily.

## Design and Manufacturing

Design and manufacture your own hand operated Automata that clearly demonstrates the following forms of motion:

- Rotary motion
- Oscillatory motion
- linear motion
- irregular motion



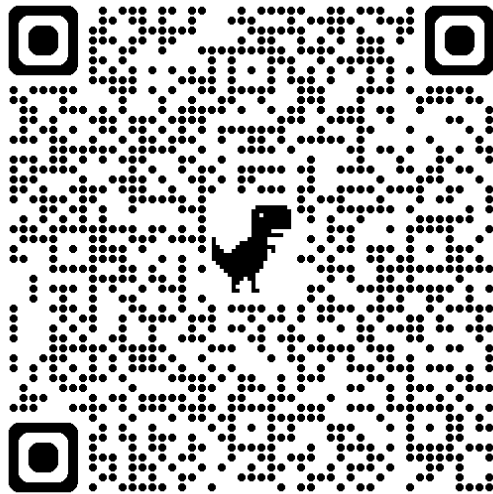
Watch the video linked to the QR code above to help you understand these wonderful creations!

Click the link below to see more complex Automata  
[Curious Contraptions](#) | [Paul Spooner](#) | [Exploratorium](#)

Could you show how these forms of motion can be created? ✓

Are you able to construct your own working Automata ✓

Prizes awarded for creativity and complexity! 🎁🏆



Scan the QR code opposite to download and Engineering Summer Work. Submit your work at the start of term.

Find out more about careers in Engineering by visiting the following websites:

- <https://www.bbc.co.uk/bitesize/articles/z7n4bdm#z2dx6g8>
- <https://www.prospects.ac.uk/jobs-and-work-experience/job-sectors/engineering-and-manufacturing>

LITERACY TASK

KNOW THIS TASK

DO THIS TASK

CAREERS TASK