

## Subject: Engineering Unit 1

Exam Board: Edexcel

Paper Unit 1 - 60 minutes

Applied mathematics  
Trigonometry  
Simultaneous equations  
Quadratic equations  
Areas of spheres, cones and cylinders.

Electrical and Electronic principles  
AC Waveforms  
Resistor networks (series and parallel)  
Ohm's Law and power  
Time constant  
Transformer windings.

Open book: Unit 3- 2 hours 30 minutes (3 lessons)

Task.

A client has asked you, as a technician engineer, to redesign the stop for a manual arm access barrier, as it is not working efficiently. The manual arm access barrier can be used to control, for example, vehicle access to a building site, car park or restricted areas within a warehouse.

Students will complete Activity 2, 3 and 5.

Useful revision resources:

Engineering text book

[www.technologystudent.com/drawingtechniques](http://www.technologystudent.com/drawingtechniques)

### Revision Tips

Read over your notes in each section and make revision resources (posters, cue cards, shortened notes, spray diagrams, post it notes etc.) complete quizzes, watch videos, complete exam questions and check against the mark scheme. When using the eBook there are quizzes in every section.

Date	Engineering U1
22/3	Applied maths - Trig, simultaneous, quadratics.
29/3	Applied maths – Areas of cones, spheres, cylinders.
19/4	Electrical/Electronic - Resistor networks, ohms law and power.
26/4	Electrical/Electronic - Time constant, transformer windings.

