

# ENGINEERING DESIGN - Level 1/2 Cambridge National Certificate. **(Draft specification awaiting final approval from OFQUAL)**

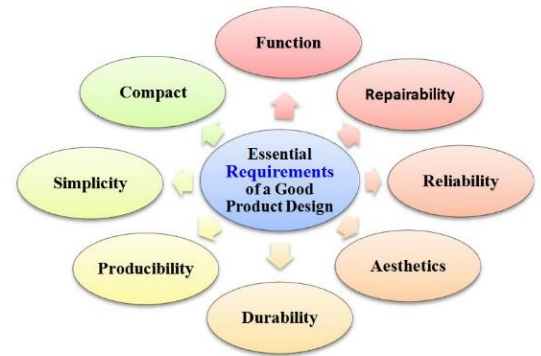
Level 2 Cambridge National Certificate in Engineering Design  
OCR exam board.

## What qualification does this course lead to?

You will be awarded one of the following grades: L2 Pass, L2 Merit, L2 Distinction and L2 Distinction\*.

## What topics will I study?

- **Knowledge how products are designed in industry**
- R038: Principles of engineering design. This is a written examination at the end of yr11 set and marked by OCR
- R039: Communicating designs. Non Examined Element (NEA = coursework) OCR moderated
- R040: Design evaluation and modelling. NEA (coursework) OCR moderated



## Centre assessed tasks

You will be given an assignment based on the unit of work. You will collect evidence and present it in the form of an assignment as evidence. Tasks could designing using freehand sketching and CAD design software, prototyping a design using craft materials, disassembly of an existing product, creating engineering drawings, writing reports about your findings.

## **THIS IS NOT A METAL WORK COURSE.**

## What understanding and skills will I develop?

- Using both 2D and 3D engineering design techniques by hand and with CAD
- Designing new products to meet a design brief
- Complete research to inform design ideas
- Solving engineering problems by exploring different design options
- Finding imaginative solutions through creative thinking



## How will I learn/ how will I be taught?

The **theory element** (unit R038) is worth 40% of the overall grade will be assessed in an externally set exam in the summer of year 11. Please note this is different than the previous engineering course). The two units of NEA (coursework) units are taught across year 10 and 11 and are assessed externally at the end of year 11. Each of these units is worth 30% of the overall qualification. When working on NEA, every lesson counts. Students will be given the opportunity to apply their engineering knowledge to a range of tasks set by the exam board. It is really important to catch up any lessons you miss because your coursework may be incomplete if you don't. NEA (coursework) is worth 60% of the overall course, so every lesson counts.

A variety of teaching and learning styles are used throughout the course and the learning focuses on the actual application of engineering knowledge into real life product design mimicking industrial processes.

**Whilst the course is 60% coursework, it is not 60% practical work, so please be aware of this when you choose.**

## How will I be assessed?

R038: External Examination – 40 % of final mark.

R039-R040: NEA (coursework). Two units of work, externally moderated. Each unit is worth 30% (in total 60 % of final mark)

## What can this course lead on to?

P16 engineering courses, apprenticeships, product design, industrial design

## Who do I need to contact for more information?

Mrs E. Dandy

Students will need to be photographed as evidence of work undertaken

