

L2 Cambridge National in Engineering Design

Cambridge National in Engineering Design will inspire and equip you with the confidence to use skills that are relevant to the sector and the wider industry. It's a vocational qualification, equivalent in value to a GCSE and contains both practical and theoretical elements. You'll develop a range of skills to help you succeed not only in the workplace but in other subjects too. These skills include creative thinking, analytical skills, problem solving and research and planning. As part of the Cambridge National, you will cover how designs are developed – including what information is needed and how manufacturing influences design. You will also learn how to communicate your design ideas using sketches, drawings, and computer aided design (CAD). You will explore how designers create and test models to make a working prototype as well as making your own high-quality models to represent design ideas.

Programme of Study & Assessment

Unit R038 – Principles of Design Engineering

In this unit you will learn about the design process, and all of the stages that are involved. Topics include: Designing processes, Designing requirements, communicating design outcomes, Evaluating design ideas.

External examination lasting 1-hour 15minutes at the end of Year 11 70 marks available.

Unit R039 – Communicating Designs

In this unit you will learn how to use sketching and engineering drawings to communicate your ideas. Topics include: Manual production of freehand sketches, Manual production of engineering drawings, Use of computer aided design (CAD)

Assessments completed in lessons during Year 10 totalling 12 hours with 60 marks available.

Unit R040 – Design, Evaluating and Modelling

In this unit you will learn how to create and test models of your design. Topics include: Product evaluation, Modelling design ideas

Assessments completed in lessons during Year 11 totalling 12 hours with 60 marks available

Useful Links

[OCR Level 1/Level 2 Cambridge National in Engineering Design specification](#)