

## LEVEL 1/2 CAMBRIDGE NATIONALS IN ENGINEERING

Examination board - OCR

5 periods per 2 weeks

### Course content

Units include:

- engineering materials, processes and production;
- preparing and planning for manufacture;
- computer aided manufacturing.

Student knowledge and understanding of engineering materials and processes will be explored in this subject. Through theory and practical lessons they will experience how different materials work and can be modified using a range of manufacturing skills and equipment. There will be the opportunity to compare how products are manufactured by hand and through CNC production systems. Materials used include metals, alloys, timber and polymers.

### Assessment

Four units are completed over this two year course including three centre assessed units and a one hour written paper. The centre assessed units include a number of practical skills projects and portfolio of evidence. Students will be taught how to use large scale industrial equipment including lathes and laser cutters to manufacture metal and timber based products. They will produce a detailed set of procedures for the quality control of engineered products that would be used in 'real-world' situations and be introduced to lean manufacturing processes.

### Progression

This subject is a good stepping stone towards apprenticeships in engineering, design, mechanics and manufacturing.

Career opportunities include: engineering, manufacturing, product design, architecture, construction, joinery, design or manufacturing based apprenticeships.

### Homework

Students are set homework each week based on the topic studied at the time. It should be noted that some tasks include completion of folder work, theory notes and questions, research and investigation tasks and sourcing materials for products.

### Next steps

Further information about this course can be obtained from Mr Rayner, Mr Huxley, Mr Wilks or Ms Holt.