



# NCFE ENGINEERING

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LEVEL 1/2 TECHNICAL AWARD





# WHAT IS ENGINEERING?

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- Engineering is the designing, testing and building of machines, structures and processes using maths and science. Studying it can lead to a rewarding career.
- Career pathways include
  - Architecture
  - Building industry
  - Electrical engineering
  - Off shore
  - Project management
  - Apprenticeships





# HOW IS THE COURSE STRUCTURED?

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You will sit a Final exam of 1.5 hours that will contribute 40% to your final grade and a 20 hour Non examined assessment (synoptic project) contributing the other 60%.

In Year 10 you will study all the course content, through 3 projects that will develop your skills to plan and execute your own project.

In Year 11 you will work independently through your own project set by the exam board and preparing for the examination.



# WHAT WILL I BE LEARNING?

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You will study

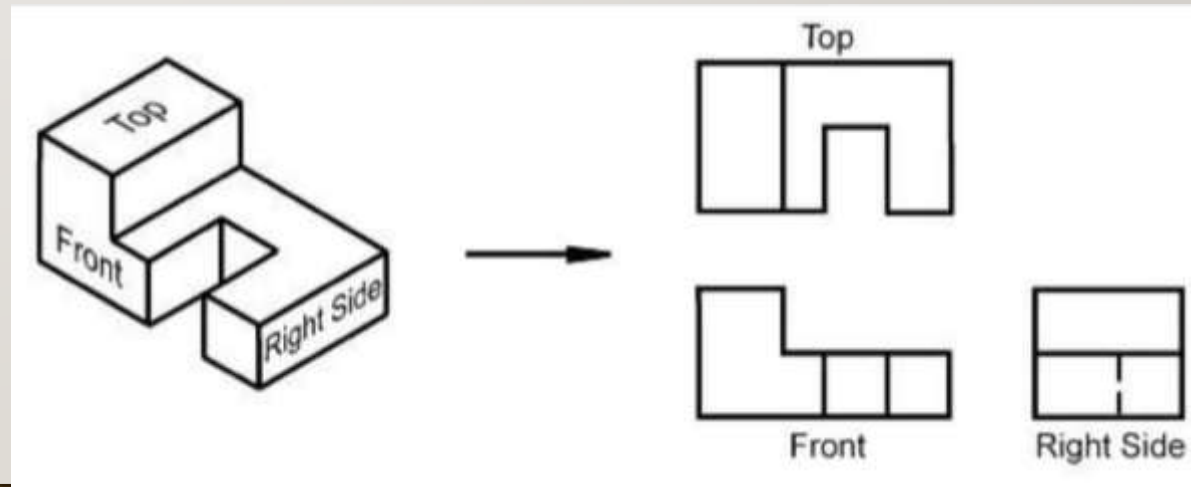
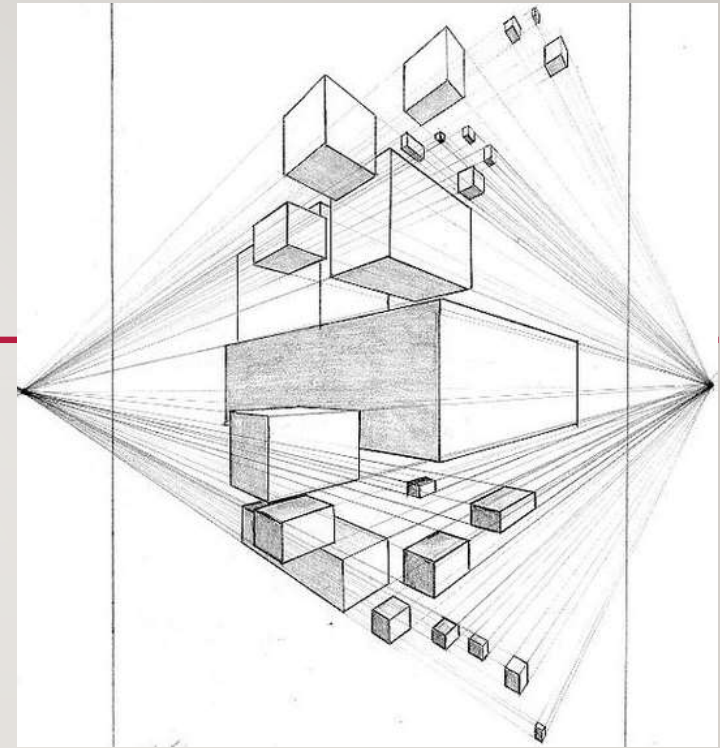
- What the engineering sector is and its disciplines (types of engineering).
- Health and safety at work and the responsibilities of employers and employees.
- Engineering drawings by hand and with Computer Aided Design (CAD).
- Materials, processes and project planning.
- Applied Science and Maths.
- Tools and equipment used in engineering.
- Production planning.





# IS THIS A PRACTICAL COURSE?

- 90% of the Engineering course is theory based, only 10% of your time is doing practical tasks in the workshop.
- Drawing a huge part of engineering and you will be learning in your theory lessons about the British standard drawing methods and practicing how to draw in these technical styles.





# WHAT COURSEWORK WILL I HAVE TO DO?

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Your NEA (Non Examined Assessment) will last 20 hours of class time in year 11.

In this time you must complete your independent synoptic project, which follows a set process:

- Research into project (2 hours)
- Task 1 – Materials research and materials selection (1.5 hours)
- Task 2 – Hand-drafted engineering drawings (2.5 hours)
- Task 3 – CAD produced engineering drawings (2.5 hours)
- Task 4 – Production plan (4 hours)
- Task 5 – Functioning prototype manufacture (4 hours)
- Task 6 – Summative evaluation (1.5 hours)



# WHERE DO I FIND OUT MORE

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If you want more information on the course and to see some examples of the type of work

Visit the Design Technology department

Talk to Mr Chidgey