


# ENGINEERING

PRE - ENROLMENT  
PACK

KICKSTART  
YOUR NEXT  
CHAPTER



# A BIT ABOUT THE ENGINEERING DEPARTMENT...

On behalf of the Engineering team – Welcome to Macclesfield College!

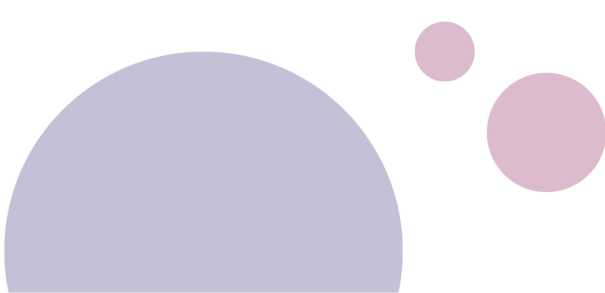
We are delighted that you have chosen to continue your education journey with us and look forward to a happy and successful working partnership together. College is a time of achievement and together we hope to help you achieve and exceed your true potential.

Our Engineering department boasts a range of industry-relevant equipment and machinery such as, an 5 axis milling machine, vacuum flatbed, a full range of Denford machine tools and a suite of 3D printers. Students will have the opportunity to meet and build connections with local employers and specialist universities.

## **WHERE COULD THIS COURSE TAKE YOU?**

Our engineering courses can take you into a variety of career pathways from working as an apprentice maintenance engineer to ultimately becoming the CEO of a large multi-national organisation.

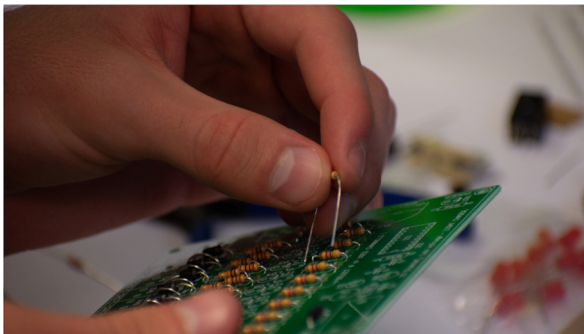
Many of our students progress onto apprenticeships or into Higher Education courses at University.



# THINGS YOU NEED TO KNOW BEFORE YOU START

Equipment list:

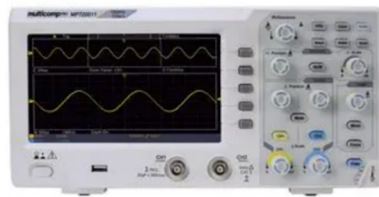
- On starting the course you will need an A4 binder, dividers, and A4 lined paper (with holes so you can add it to your binder).
- You will need a standard set of stationery e.g. pens of different colours, pencils, a protractor, a ruler, scientific calculator.
- For your mechanical workshop sessions, you will need a set of overalls and steel toe-capped boots. Eye protection will be provided.



# A TASK TO GET YOU STARTED...

## TASK 1: ENGINEERING EQUIPMENT

How well do you know the equipment used by engineers?



## **TASK 2: HAVE A LOOK AROUND SOLIDWORKS**

[solidsolutions.co.uk](http://solidsolutions.co.uk)

Download your free trial and get to know how you can use Solidworks for computer-aided design.

You will find lots of tutorials in the software and also on YouTube.



## **TASK 3: THE MARSHMALLOW AND SPAGHETTI TOWER**

You are allowed to use 1 marshmallow, 1m of tape, 1m of string, and 20 sticks of spaghetti. Build a tower and place the marshmallow on the top of it. Record the height of the tower.

## **TASK 4: ENGINEERING CHALLENGES**

Some of the major engineering challenges of the next decade have been identified as:

- Alternative Energy
- Clean Water
- Climate Change
- Cyber Security
- Healthcare

Do you agree with that these are major challenges?

Would you add anything else to the list, or remove some of the ideas?

Why?

## **TASK 5: THINKING AHEAD**

Identify five engineering organisations that you might want to work for when you complete your qualification.

What attracts you to working for them?



# NOTES

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# KICKSTART YOUR NEXT CHAPTER



Get in touch

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