HANDS UP
WHAT DO ENGINEERS DO?
A LOT!

ENGINEERING AFFECTS ALMOST EVERY INDUSTRY IMAGINABLE.
VEHICLE ENGINEER

A Vehicle Engineer designed the systems that move the car at high speeds.

ELECTRICAL ENGINEER

An Electrical Engineer found a way to transmit and distribute electricity to power the car’s movement.

STRUCTURAL ENGINEER

A Structural Engineer worked on making sure the track could support the weight of the car and resist storms and earthquakes.
SOFTWARE ENGINEER

A Software Engineer designed the phone’s apps and developed how they work.

TELECOMMUNICATIONS ENGINEER

Thanks to a Telecommunications Engineer your phone can connect to satellites and other phones, so you can make calls, send texts and get on the Internet.

HARDWARE ENGINEER

A Hardware Engineer created the circuits and the physical parts of the phone, and tested it, to make sure it worked properly.
**TRAINERS**

**SPORTS ENGINEER**
A Sports Engineer designed, developed and tested this trainer and all kinds of other sports equipment.

**WEB ENGINEER**
A Web Engineer made it possible for you to view and purchase these trainers and other bits of clothing online.

**TEXTILE ENGINEER**
A Textile Engineer worked out what fabric to use and the machinery to actually make the trainers.
WHAT DO YOU NEED TO BECOME AN ENGINEER?
science technology engineering maths + curiosity communication dedication
WHY ARE WE TALKING TO YOU ABOUT ENGINEERING?
THE WORLD NEEDS MORE ENGINEERS.
There's a shortage of engineers.

At least 20,000 less than we need annually!
1.74 jobs supported by every person employed in engineering

19% of total UK employment is in engineering

7% rise in 2015 in the number of UK engineering enterprises

By 2024 there will be a demand for 265,000 skilled engineering entrants annually

68% of engineering graduates find full-time work six months after graduation

96% of teachers would recommend a career in engineering to their pupils
AEROSPACE
SPACE
TRANSPORTATION
DEFENCE
SECURITY
AEROSPACE

OUT OF EVERY 3 AIRCRAFT IN THE WORLD
USE OUR EQUIPMENT TO SAFELY TAKE OFF AND LAND.

OVER 130,000 PEOPLE ENJOY OUR IN-FLIGHT ENTERTAINMENT SYSTEMS.
WE’RE LEADING IRIDIUM NEXT, THE WORLD’S LARGEST CONSTELLATION OF SATELLITES.

WE’RE THE WORLDWIDE LEADER IN SATELLITE OCEANOGRAPHY.
TRANSPORTATION

WE HELPED CREATE THE NATIONAL RAIL ENQUIRIES ONLINE JOURNEY PLANNER AND THE RAIL PLANNER LIVE APP.

OUR FARE COLLECTION SYSTEMS HANDLE OVER 50 MILLION TRANSACTIONS DAILY.
WE HELP DESIGN SOME OF THE NAVY’S BIGGEST SHIPS.

WE MADE THE RADAR SYSTEMS THAT ENABLE THEM TO COMMUNICATE.
SECURITY

WE MADE TEOPAD, WHICH USES PATENTED TECHNOLOGY TO ENSURE PEOPLE’S DATA AND INFORMATION STAYS SAFE.

THALES SECURES THE INFORMATION SYSTEMS OF 19 OF THE WORLD’S 20 LARGEST BANKS.
ALL THIS AMAZING WORK IS BEING DONE BY THALES’ VERY OWN ENGINEERS.
SOFTWARE ENGINEERS

ARE CREATIVE PROBLEM-SOLVERS WHO LOVE CODING AND DESIGNING LARGE COMPUTER SOFTWARE SYSTEMS.

AT THALES

Software Engineers write flight simulator training programmes to train pilots to fly.
Systems Engineers

They do everything from designing new products to creating large software projects and developing new tech.

At Thales

Systems Engineers get involved in so many different projects that they often work in teams with other engineers.
MECHANICAL ENGINEERS

Design, build, test and produce all kinds of machines and devices from power stations to household appliances.

At Thales

Mechanical Engineers work on aircrafts and in other areas like robotics and cyber security.
ELECTRICAL ENGINEERS are science whizzes that often create new technologies and make sure those technologies work with the hardware they are being put into.

AT THALES

Electrical Engineers design, make and test the electrical systems in electric motors, radars and navigation systems.
MANUFACTURING ENGINEERS

HAVE THE JOB OF FIGURING OUT HOW TO MAKE THE PRODUCTION OF THINGS MORE EFFICIENT AND RELIABLE.

AT THALES

Manufacturing Engineers are part of product development and are always making changes to improve how things are working.
HOW TO BECOME AN ENGINEER AT THALES

ON-THE-JOB TRAINING

APPRENTICESHIPS
Intermediate / Advanced / Higher / Sponsored Degree
Earn while you learn
E.g. NVQ / SVQ / BTEC / degree

UNIVERSITY DEGREE
Bachelor’s (BEng)
Master’s (MEng)

WORK

SCHOOL
Science (Physics and Chemistry), Maths, D&T and Computing

6TH FORM / FE COLLEGE
A levels / IB / Highers (or equivalent)
BTEC
HNC & HND
Foundation Degree
WHAT’S IT LIKE BEING AN APPRENTICE?

There are lots of different kinds of apprenticeships that vary in length and give you a different qualification.

- You’ll get on-the-job training and classroom learning
- You’ll earn while you learn
- You’ll work towards your professional registration
- You can apply from 16
- You’ll greatly improve your chances of getting a full-time job after completing your training
WHAT'S IT LIKE BEING A GRADUATE?

The most popular route is to do an undergraduate degree. Sometimes people will go on to do a master’s degree to really develop their expertise in engineering.

- You’ll study a lot of different courses
- You’ll network with professors and learn from industry professionals
- You can become eligible for a professional registration as an Incorporated Engineer or Chartered Engineer
- If your degree allows, you could work abroad for a year as part of your programme
- Once you graduate, you’ll have a lot of career options available
WHY I LOVE BEING AN ENGINEER AT THALES.
ANY QUESTIONS?
HANDS UP