

# Career Route Map

## for Engineering in England

Tomorrow's  
Engineers

### Where do I start?

LEVEL 1

#### School / College / Workplace

- GCSE 3-1 (D-G)
- BTEC Level 1 / NVQ 1
- **Traineeships:** For 16-23 year olds qualified below Level 3

LEVEL 2

#### School / College / On-the-job training

- **Apprenticeship (Intermediate):** Engineering, IT, Construction, Built Environment, Manufacturing
- **GCSE / IGCSE 9-4 (A\* to C):** Maths, Science (ideally triple science)  
(Useful subjects: D&T, ICT, Computing, Engineering)
- **BTEC Level 2 / NVQ 2:** Engineering, Construction & Built Environment, Science, ICT

LEVEL 3

#### 6th Form / College / On-the-job training

- **Advanced Apprenticeship:** Engineering, IT, Construction, Built Environment, Manufacturing
- **A level:** Maths, Physics  
(Useful subjects: Chemistry, Computing, D&T, Further Maths)
- **IB Diploma:** Higher Level Maths, Physics  
Chemistry – for chemical and biomedical engineering
- **Tech Level Qualifications (T-levels), e.g. BTEC Level 3 / NVQ 3:** Engineering, Construction & Built Environment, Science, ICT

### What next?

#### Training and Education

##### Advanced / Higher Apprenticeship

- Available in a variety of industries including: Advanced Manufacturing, Aerospace, Automotive, Power, IT, Construction, Sustainable Technologies
- Combine workplace training with study
- Typically 3 to 4 years
- Can include vocational qualifications or a degree
- Approved by the Engineering Council

##### Higher National Certificate (HNC) / Diploma (HND)

- Vocational higher education qualifications, often taken whilst in employment
- Can be taken at F.E. colleges and universities
- Typically 1 to 2 years

##### Foundation Degree (FD)

- Usually undertaken as a part time qualification whilst in employment
  - Typically 2 years
- Further learning to Bachelor's level required for IEng registration

##### Degree Apprenticeship

- Combine workplace training with studying towards Bachelor's or Master's degree
- Typically 3 to 6 years

##### University Degrees

- In general engineering, a specific field of engineering, computer science, manufacturing or technology
- Accredited by the Engineering Council

##### Bachelor's Degree (BEng / BSc)

- 3 to 4 years
- Can include a year working in industry / a year abroad
- Can be followed by a 1-year MEng/MSc to register as a Chartered Engineer

##### Master's Degree (MEng / MSc)

- 4 to 5 years
- Can include a year working in industry / a year abroad

### Progressing to...?

#### Professional Registration

Engineering Technician (EngTech)  
or ICT Technician (ICTech)

Incorporated Engineer (IEng)

Chartered Engineer (CEng)

Visit the Engineering Council's website  
at [www.engc.org.uk](http://www.engc.org.uk)

For details of all routes into engineering, go to:  
[www.tomorrowsengineers.org.uk](http://www.tomorrowsengineers.org.uk)

Where you can also find:  
Case studies & job profiles  
'Whose Crew Are You?' quiz  
Careers materials & activities

and lots more...

