Focus on Engineering

Oxfordshire Labour Market Information, Winter 2016
Produced by Oxfordshire Local Enterprise Partnership

From the car we drive to the development of medical equipment; from super magnets to new low carbon technologies, here in Oxfordshire, engineers are involved in designing, developing, constructing and testing practically every product or process you can think of.

- 'Engineering' encompasses a huge array of jobs and industries and it is incredibly important to the national and local economy. According to The State of Engineering Report 2014, this sector makes up a nearly a quarter of the economy (24% of UK turnover) from all enterprises and it employs 5.4 million people. While most firms are small or micro, the construction sector accounts for 27% of all engineering related enterprises and 27% are in information and communication while manufacturing accounts for a fifth.

This sector is thriving and the future capacity for growth in this area is very real. It is estimated there is a need, nationally, for 87,000 engineers every year for the next ten years and that these people will need to hold at least level 4 skills. However, there is a serious shortfall and women are currently under-represented across the field.

What is an Engineer?

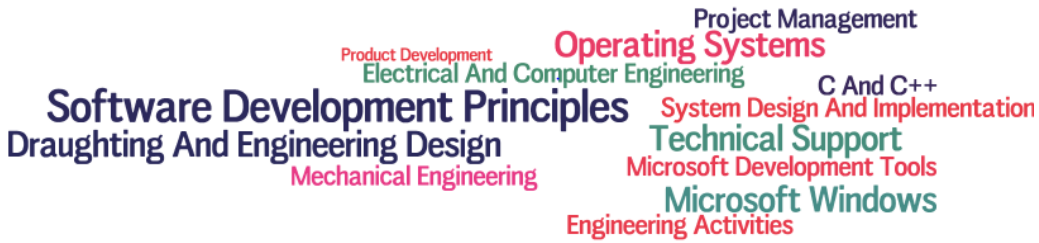
An engineer applies scientific knowledge, mathematics, and ingenuity to develop solutions for technical, social and commercial problems. Engineers design materials, structures and systems while considering the limitations imposed by practicality, regulation, safety, and cost. Engineers can be found in the science, construction and manufacturing sectors of industry.

A changing world means engineering roles are changing. Sectors identified for their strength, concentration and growth potential in Oxfordshire include: **automotive, motorsport, aerospace, space and satellite applications, life sciences, and low carbon technologies.**

Occupation type	Mean advertised salary 2016
Programmers and software developers	£50,737
IT business analysts, architects and systems designers	£49,584
Design and development engineers	£43,035
Electrical engineers	£40,816
Civil engineers	£38,479
Engineering technicians	£33,898
IT user support technicians	£29,792
Electrical and electronic trades	£28,643

Starting salary for a qualified engineer is about £25,000
Experienced engineers can expect to earn £35,000 to £45,000
Senior positions command up to £65,000

Skills clusters for Engineering roles, Oxfordshire, 2016



Personal attributes to be an engineer: Practical, creative, enjoy solving problems, interested in craft, design and technology.

Physics, maths, design and technology are all relevant fields of study.

Vacancies, 2016	No. of postings
Programmers and software developers	2,293
Design and development engineers	1,561
Electrical and electronic trades	1,011
IT business analysts, architects and systems designers	996
Engineering technicians	735
Civil engineers	723
IT user support technicians	520
Electrical engineers	478
Mechanical engineers	474
Engineering professionals	448
Quality control and planning engineers	396
Plumbers and heating/ventilating engineers	351

Engineering posts most in demand in Oxfordshire are for IT engineers. Electrical and electronic, civil and mechanical engineers are in demand too.

Mechanical Engineers

Mechanical Engineers provide efficient solutions to the development of processes and products, ranging from small component designs to extremely large plant, machinery or vehicles.

They can work on all stages of a product, from research and development to design and manufacture, through to installation. Most industries rely on a form of mechanical system so mechanical engineers are needed in a range of industries.

Civil Engineers

Civil engineers work on public projects involving the design, build and maintenance of the natural and built environment. These infrastructure projects can be roads and railways, hospitals, sports stadia, schools, access to drinking water and shelter from the weather.

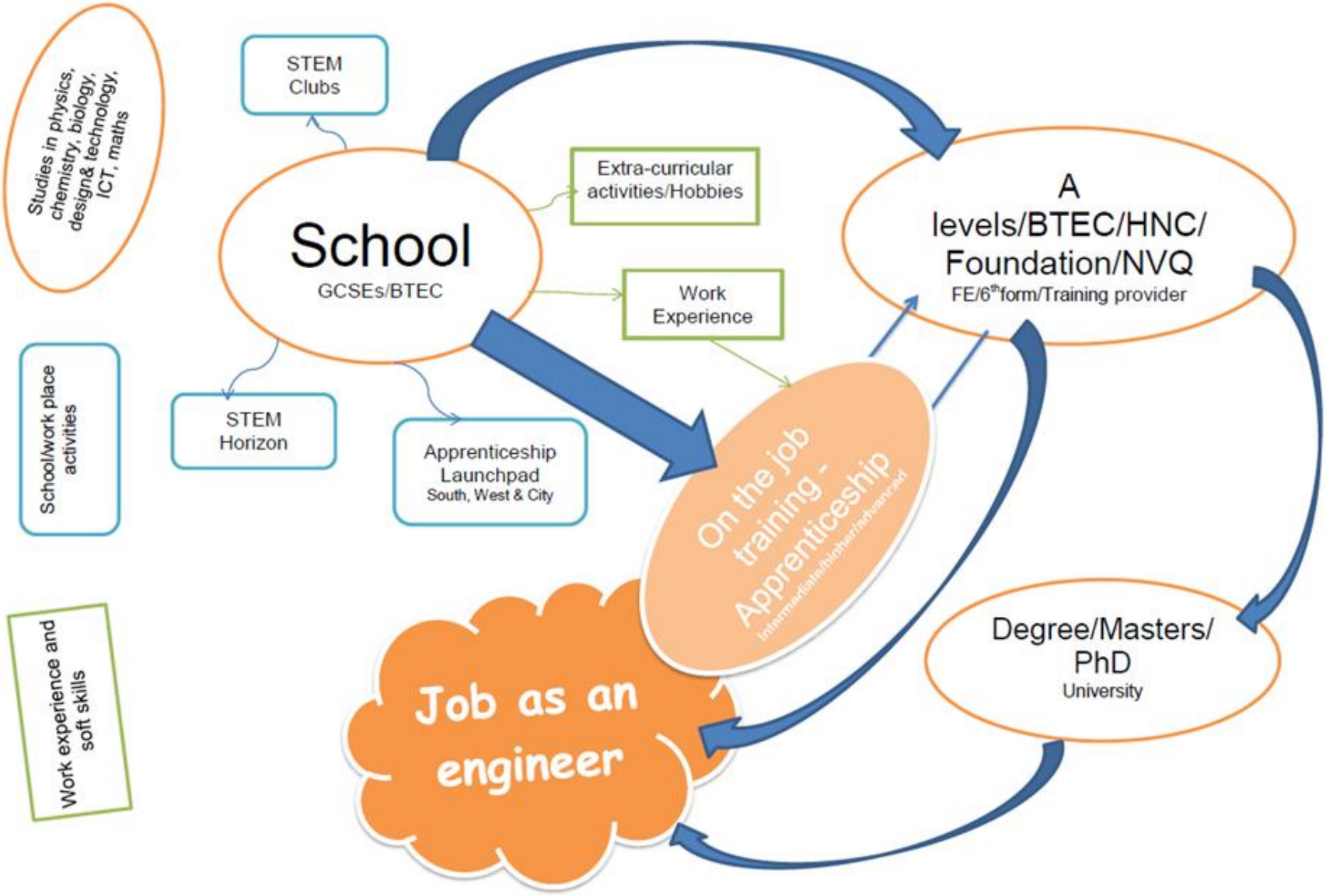
A civil engineer will be closely involved in ensuring a project is delivered safely, on time and within budget.

Trainees usually begin their career in design, and progress to managing projects, liaising with clients and architects and supervising contractors.

Engineering Technician

Engineering technicians work in a range of industries solving practical engineering problems. They typically assist engineers and scientists. They can build or set up equipment, conduct experiments, and collect data and calculate results. They might also help to make a model of new equipment.

Some technicians work in quality control, where they check products, do tests, and collect data. In manufacturing, they help to design and develop products. They also find ways to produce things efficiently. They may also be people who produce technical drawings or engineering drawings.



Focus on Engineering: Working in Oxfordshire