OPEN THE DOOR TO A CAREER IN BUILDING SERVICES

A guide for parents of students aged 11-16
Building services engineering offers the potential to build a rewarding career in a sector that is growing in importance and opportunity.

Building services transform the way in which we experience buildings. The services – lighting, heating, lifts, security systems and a host of other technologies – are key to making buildings comfortable and safe for people living and working in them.

It is building services engineers who enable buildings, from homes to hospitals, to function efficiently. They design systems to help manage infection risk in operating theatres, crowds in football stadiums and security in airport terminals. It’s their job to ensure these systems operate effectively, sustainably and unobtrusively and blend with the architectural design of the building.

Around half of the energy used in the UK goes into buildings to keep their services running. Building services engineers therefore have a key role to play in helping us, and our buildings, use natural resources wisely. They help buildings and occupants tackle the new and emerging challenges presented by major issues including global urbanisation, our changing climate and cybersecurity.
WAYS TO PREPARE FOR A GREAT CAREER

STEP 1: KEEPING OPTIONS OPEN
It’s important that students gain a pass in mathematics and science to ensure that they don’t close the door on options later and start on the right track. Design and technology is also a good subject to choose.

STEP 2: WHERE NEXT?
After GCSE (or equivalent) level, there are three options:

1. GOING TO COLLEGE
A college course should lead to at least a BTEC level 3 or equivalent award in building services engineering, mechanical engineering, electrical engineering, energy or a related construction or engineering subject.

2. OPTING FOR AN APPRENTICESHIP
Apprenticeships offer the chance to earn while learning, and are offered by a range of companies in the building services and construction related sectors. The government’s careers website gives more information.

3. STUDYING TOWARDS UNIVERSITY
Students will need to continue their studies in mathematics and sciences, targeting the good grades required by their chosen university. Suitable degree courses may cover building services engineering, mechanical engineering, electrical engineering, architectural engineering or environmental engineering.
WHY CHOOSE BUILDING SERVICES ENGINEERING?

Here are five reasons why building services engineering can be a great career choice:

1. PROSPECTS FOR EMPLOYMENT

Our buildings and cities rely on building services engineers to design them and keep them running efficiently 24/7, so people with the right skills are often in demand. The overall UK engineering sector employs around 5.5 million people, and needs to recruit more than 180,000 skilled people a year to meet anticipated demand.

The UK construction industry as a whole employs some 3 million workers in around 250,000 businesses, ranging from small enterprises to major multi-nationals. The UK’s talent and expertise in construction is recognised globally so the industry provides opportunities to work on major building projects around the world.

2. CLIMBING THE CAREER LADDER

Building services engineering has many career paths, progressing through such roles as project engineer to senior manager, director or partner, while some professionals go on to establish their own successful businesses. Building services engineering offers everyone the chance to pursue their own career goals.
A graduate starter in building services engineering typically earns around £26,000 a year. As professionals progress and gain Incorporated Engineer (IEng) or Chartered Engineer (CEng) status, their salary can rise to £50,000 a year, with senior managers and project directors enjoying average annual salaries of more than £70,000.

The working life of a building services engineer can be richly varied. In the office, duties can include scoping out a new building project with its architects, solving engineering problems using latest design, modelling and visualisation software and presenting designs to clients. Building services engineers are also often out on site, guiding an installation team, managing a maintenance team or seeing how a design works in practice.

There’s a popular misconception that working in engineering can be dull. But in fact building services engineering can offer opportunities to work on some of the most exciting construction projects in the UK and worldwide. It is fairly commonplace for building services engineers to travel not only UK-wide, but also overseas for business. Opportunities could range from working on skyscrapers in Dubai or the USA, to meetings with manufacturers in Germany or China to discuss innovative environmental technologies for buildings.
As a parent you can provide practical help and support in a number of different ways. You can:

**Encourage your child to think carefully about the subjects they want to study,** and where they could lead. It’s important for students to think about their academic strengths and weaknesses, as well as what they find enjoyable and what’s more challenging.

**Give your child opportunities to explore engineering** and develop their interests through such activities as tours of buildings, visits to science-based museums and participation in dedicated networks. See the sources at the end of this guide to learn more. By helping your child to engage with the world of engineering, you could be helping not only to develop their interest but to boost their college, university or work application later.

**Help research the study and career options.** There’s a wealth of information out there, and you can help in identifying suitable courses and potential employers.

**Discuss the different career options** with your child to help them arrive at the right route for them. Now’s the time to think about working life.

**Get involved and grow your own understanding of the subject,** so that you and your child can learn together and share discoveries in engineering.
ENGINEERING DEVELOPMENT TRUST – ENGINEERING EDUCATION SCHEME

The Engineering Development Trust (EDT) offers short courses and initiatives about science subjects and careers. This nationwide education charity has guidance for teachers and parents. Check out: www.etrust.org.uk

YOUNG ENGINEERS AND SCIENCE CLUBS SCOTLAND (YESC)

Young Engineers and Science Clubs Scotland (YESC) has clubs in more than 1,400 Scottish schools. Check out: www.yescotland.co.uk

CHARTERED INSTITUTION OF BUILDING SERVICES ENGINEERS

The Chartered Institution of Building Services (CIBSE) is the professional body for building services engineers. CIBSE approves courses and work-based training programmes, providing routes to professional registration and membership. Log on to the website to find lists of approved courses and companies that offer a CIBSE accredited training and development scheme. CIBSE also produces a series of guides for students and parents on planning a career in building services engineering. Check out: www.cibse.org