Building Services Engineer

A building services engineer designs equipment in buildings and advises on installation. This includes heating, ventilation, air-conditioning, refrigeration (HVACR) systems, water pipes, lifts, escalators, lighting, acoustics, fire protection and telecommunications cabling.

The Work

There are several specialist areas where you could work, including air conditioning and refrigeration, electrotechnical, heating and ventilation and plumbing. You could be:

- discussing requirements with clients and the rest of the construction team
- calculating the volume of space the system is to heat or ventilate and the numbers of people passing through the area
- taking into account global environmental issues such as energy efficiency and the need to reduce emissions of carbon dioxide (CO2)
- evaluating the performance of existing systems and equipment and deciding if it needs upgrading or replaced
- estimating the cost and managing budgets
- preparing 2D and 3D designs using computer-aided design (CAD) software and building information modelling
- overseeing the work while it goes on, making sure it meets health and safety and legal requirements
- monitoring the operation of the services once installation is complete
- researching new technologies and products.

Pay

The figures below are only a guide. Actual pay rates may vary, depending on:

- where you work
- the size of the company or organisation you work for
- the demand for the job.

New trained building services engineers earn around £24,000 to £27,000 a year.

Those with experience can earn £27,000 to £35,000 a year. More experienced building services engineers £35,000 to around £50,000 a year.

Conditions

- You will split your time between working in an office, and out and about visiting sites.
- When on site, you have to wear protective clothing: hard hat, safety boots and overalls.
- Normal working hours would be Monday to Friday, 9.00am to 5.00pm, although you may have to work some evenings and weekends to meet project deadlines.
- You may have to travel long distances to different jobs and spend periods away from home, possibly

abroad.

Getting In

- You could enter at technician level after completing a relevant HNC (SCQF Level 7) or HND (SCQF Level 8) in an engineering discipline. Glasgow Kelvin College offers an HNC in Building Services Engineering on a full or part time basis. You need Higher Maths or Physics (or another Higher plus Maths at National 5) or a relevant NC at SCQF Level 6.
- Other relevant subjects include environmental engineering, electrical, electronic, mechanical or systems control engineering.
- Entry requirements for an HNC or HND are usually 1-2 Highers, or relevant NC or NQ (SCQF Levels 4-6). Maths and Physics may be required.
- To enter as a trainee engineer, you would have a relevant degree or postgraduate qualification.
- Entry requirements for an engineering degree are usually 4-5 Highers, preferably including Maths and Physics plus National 5 English.
- Glasgow Caledonian University offers a BEng Hons (SCQF Level 10) degree course in Building Services Engineering on a full or part time basis. Entry is to 2nd or 3rd year entry for those with a relevant HNC or HND.
- You might enter through a Graduate Apprenticeship in Engineering: Design and Manufacture (at SCQF Level 10). Relevant Highers are required.

Premises, such as hospitals, information technology centres and swimming pools, need specialist services. Jobs are with building firms, architects' practices, design consultancy firms, civil engineering companies, equipment manufacturers, NHS Trusts, power stations and local authorities.

What Does It Take

You need to have:

- excellent communication skills
- report writing skills
- strong problem solving and analytical skills
- an interest in architecture and building planning
- technical and design abilities
- a responsible attitude to safety issues.

You need to be able to:

- handle complex information
- use CAD and specialist design software
- organise work programmes and projects
- keep to a budget
- work to a deadline
- work alone and also as part of a team.

Training

- After gaining your qualifications, training is mainly on the job.
- After gaining your HNC, HND or degree and some practical experience with an employer, you can go on to register with the Engineering Council as a professional engineer – either Incorporated Engineer (IEng) or Chartered Engineer (CEng).
- For IEng you need to have either a recognised Bachelor's degree or a recognised HNC or HND plus further study to Bachelor's degree level.
- For CEng you need to have a recognised Bachelor's degree with Honours plus a recognised Masters degree (or equivalent), or a recognised integrated Master of Engineering (MEng) degree.
- If you do not have any of the above qualifications, you may still be able to achieve IEng or CEng by other approved routes. You can check these alternative routes with the Engineering Council or with the appropriate professional engineering institution.
- As a chartered or incorporated engineer, you are required to keep up to date with latest technology and technical information through continuous professional development (CPD).

Getting On

- You might go on to specialise, for example in energy management, public health engineering or acoustics.
- You could do a degree part time to go from technician level to engineer level.
- You could become an energy manager, a contract or project manager, commissioning engineer or estimator.
- You might become a partner in a private practice, working on short-term contracts or as a consultant.

More Information

For more information please see the list of professional bodies below:

- Building Engineering Association (BESA)
- Chartered Association of Building Engineers (CABE)
- Chartered Institute of Building Service Engineers (CIBSE)

Contacts

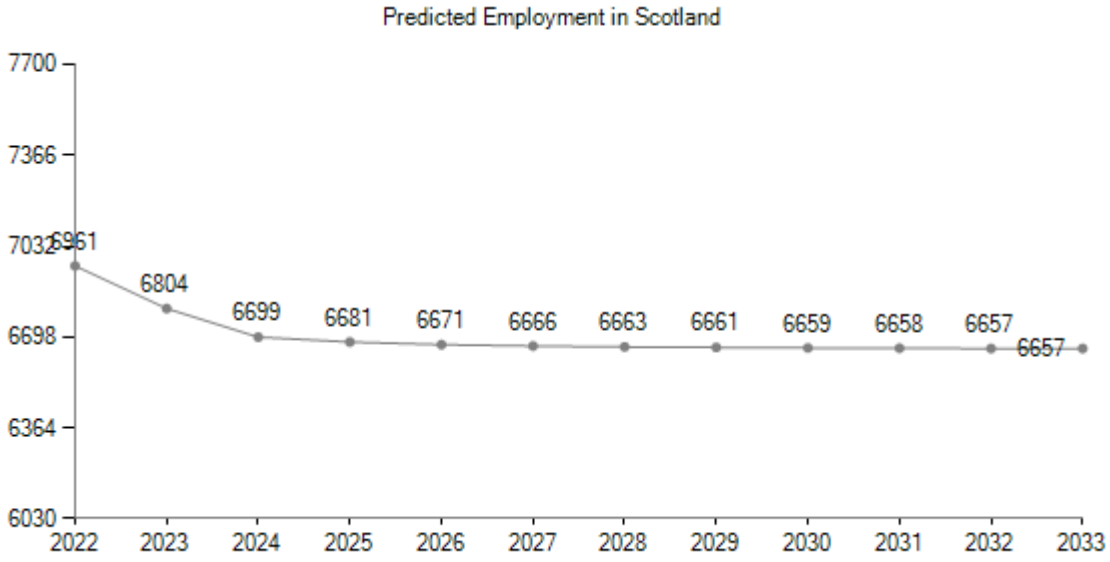
GoConstruct
Website: www.goconstruct.org
X: @GoConstructUK
Facebook: www.facebook.com/goconstructuk

Statistics

Past Unemployment - Scotland

No Claimant statistics available for Scotland.

LMI data powered by LMI for All



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