

# Job of The Week

## Structural engineer

### Key Skills

- Maths knowledge
- knowledge of engineering science and technology
- knowledge of building and construction
- design skills and knowledge
- excellent verbal communication skills
- complex problem-solving skills
- thinking and reasoning skills
- to be thorough and pay attention to detail
- to be able to use a computer and the main software packages confidently

**Salary**  
£24,000 - £55,000

**Working hours**  
37-42  
a week  
between 8am and 6pm

Aspire | Challenge | Achieve

# Structural Engineer

## University

You can do a degree or postgraduate course in:

- structural engineering
- architectural engineering
- civil and structural engineering

You might have an advantage if you do a course that includes an internship or a year in industry placement. Your university careers service can advise on how to find relevant work experience.

You can find accredited courses through the Engineering Council.

### Entry requirements

You'll usually need 2 or 3 A levels, or equivalent, including Maths and a Science for a degree or a degree in a relevant subject for postgraduate study

## College

You could do a college course in civil engineering. This might help you to find work as a trainee structural engineer. You'll then need to do more training on the job to qualify.

### Entry requirements

Entry requirements for these courses vary.

## Post 16

To become a structural engineer, you'll need a strong foundation in subjects that will prepare you for university courses in engineering. Typically, the following A-Levels are recommended:

- Mathematics
- Physics
- Further Mathematics

Additionally, some universities might also value or consider

- Chemistry
- Design and Technology

## Apprenticeship

You could apply to do a Civil Engineer Level 6 Degree Apprenticeship and take professional training afterwards to qualify as a structural engineer.

### Entry requirements

You'll usually need 4 or 5 GCSEs at grades 9 to 4 and A levels, or equivalent, for a degree apprenticeship

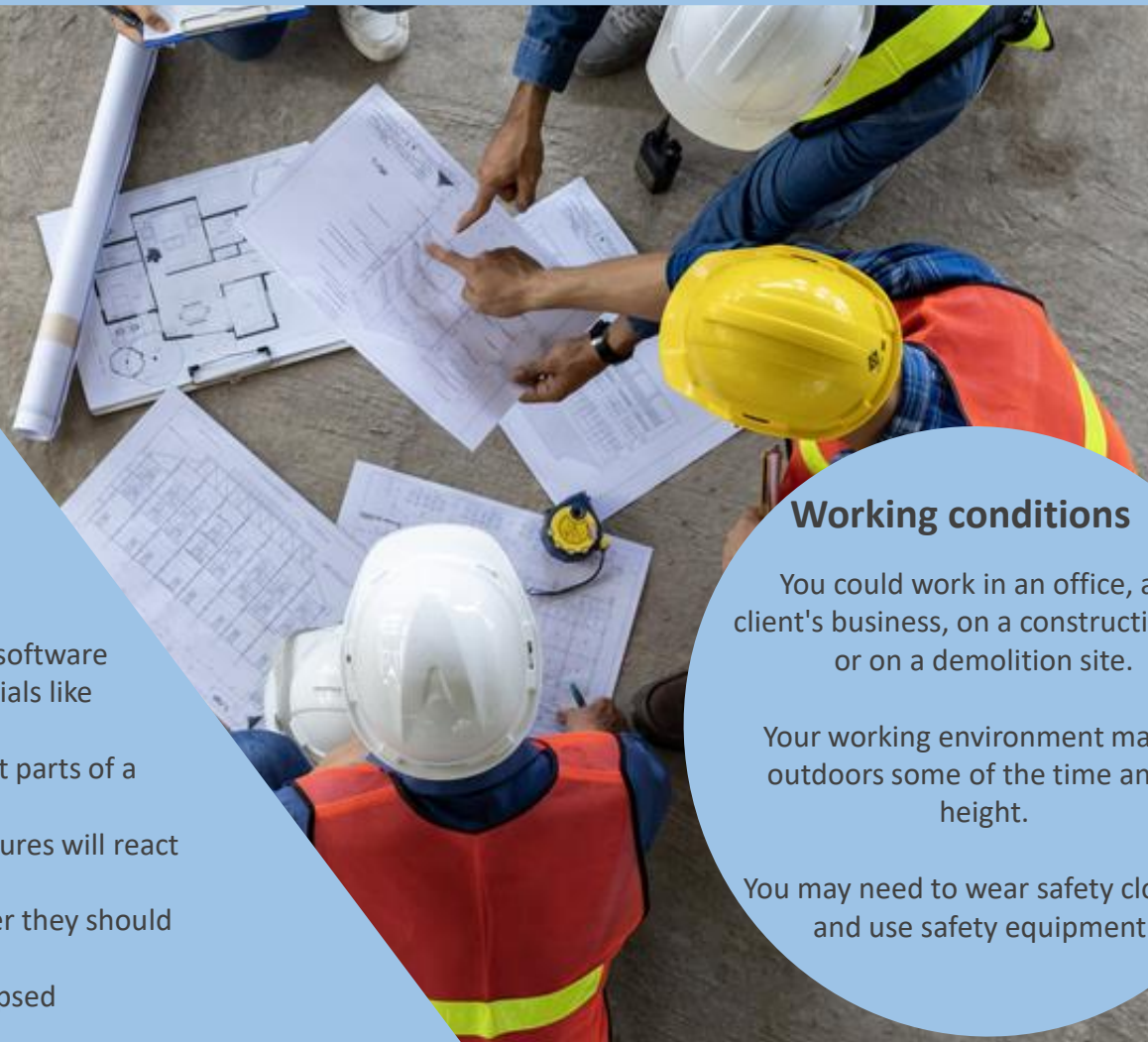


## Career path and progression

Look at progression in this role and similar opportunities.

You could move into:

- construction design
- project management
- research or lecturing
- freelance consultancy work, like providing services to building insurers
- work on construction and engineering projects overseas, with disaster relief agencies



## Day to Day tasks:

As a structural engineer you could:

- develop engineering plans using computer software
- investigate the properties of building materials like glass, steel and concrete
- work out the loads and stresses on different parts of a building
- use computer models to predict how structures will react to the weather
- inspect unsafe buildings and decide whether they should be demolished
- work out why and how buildings have collapsed

## Working conditions

You could work in an office, at a client's business, on a construction site or on a demolition site.

Your working environment may be outdoors some of the time and at height.

You may need to wear safety clothing and use safety equipment.

# Labour Market Information

In the Careers section of the school website you can find the useful comparison tool the 'Labour Market Information widget'.

Use the widget to compare different job roles in any employment sector or relating specifically to the 'Job of the Week'.

## Building and civil engineering technicians

Weekly Pay <b>£700</b>	Annual Pay <b>£36,400</b>
Hours/Week <b>36h</b>	Hourly Pay <b>£19</b>

### Workforce Change (projected)

Growth <b>0.5%</b>	Replacement <b>43%</b>
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The workforce is projected to grow by 0.5% over the period to 2027, creating 100 jobs.  
In the same period, 43% of the workforce is projected to retire, creating 9,900 job openings.

You might find this job in  
Civil engineering  
Construction  
Specialised construction  
Architectural & related  
Education

[More info](#)

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## Engineering technicians

Weekly Pay <b>£760</b>	Annual Pay <b>£39,520</b>
Hours/Week <b>35h</b>	Hourly Pay <b>£22</b>

### Workforce Change (projected)

Growth <b>0.5%</b>	Replacement <b>43%</b>
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The workforce is projected to grow by 0.5% over the period to 2027, creating 500 jobs.  
In the same period, 43% of the workforce is projected to retire, creating 41,900 job openings.

You might find this job in  
Specialised construction  
Head offices, etc  
Public admin. & defence  
Metal products  
Machinery, etc

[More info](#)

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## Steel erectors

Weekly Pay <b>£570</b>	Annual Pay <b>£29,640</b>
Hours/Week <b>53h</b>	Hourly Pay <b>£11</b>

### Workforce Change (projected)

Contraction <b>-1.1%</b>	Replacement <b>50.9%</b>
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The workforce is projected to contract by -1.1% over the period to 2027, losing 100 jobs.  
In the same period, 50.9% of the workforce is projected to retire, creating 4,900 job openings.

You might find this job in  
Metal products  
Civil engineering  
Specialised construction  
Basic metals

[More info](#)

[Clear card](#)



# Labour Market Information

## Building and civil engineering technicians

Building and civil engineering technicians perform a variety of technical support functions to assist civil and building engineers.

Common tasks in this job:

- sets up apparatus and equipment and undertakes field and laboratory tests of soil and work materials;
- performs calculations and collects, records and interprets data;
- sets out construction site, supervises excavations and marks out position of building work to be undertaken;
- inspects construction materials and supervises work of contractors to ensure compliance with specifications and arranges remedial work as necessary.

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## Electronics engineers

Electronics engineers undertake research and design, direct construction and manage the operation and maintenance of electronic motors, communications systems, microwave systems, and other electronic equipment.

Common tasks in this job:

- undertakes research and advises on all aspects of telecommunications equipment, radar, telemetry and remote control systems, data processing equipment, microwaves and other electronic equipment;
- determines and specifies appropriate production and/or installation methods and quality and safety standards;
- organises and establishes control systems to monitor performance and evaluate designs;
- tests, diagnoses faults and undertakes repair of electronic equipment.

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## Engineering technicians

Engineering technicians perform a variety of technical support functions to assist engineers with the design, development, operation, installation and maintenance of engineering systems and constructions.

Common tasks in this job:

- plans and prepares work and test schedules based on specifications and drawings;
- sets up equipment, undertakes tests, takes readings, performs calculations and records and interprets data;
- prepares estimates of materials, equipment and labour required for engineering projects;
- diagnoses and detects faults and implements procedures to maintain efficient operation of systems and equipment;

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# Keep looking...

Use these links to learn more about our Job of The Week, consider the various pathways leading to the career, what you can be doing now to help yourself and other roles in the industry...

Take a look at these short videos for inspiration...

## Day in the Life



<https://www.youtube.com/watch?v=jrYalYePogw&pp=ygUjZGF5IGIulHRoZSBSaWZlIHNOcnVidHVyYWwZw5naW5lZlXI%3D>

## Becoming an Aerospace Engineer



<https://www.youtube.com/watch?v=XT-SyOK4YCs&pp=ygUWc3RydWN0dXJhbCBlbmdpbmVlciB1aw%3D%3D>

## What is Civil Engineering?



<https://www.youtube.com/watch?v=JlEU94WBqs&pp=ygUwV2hhdCBpcyBdaXZpbCBFbmdpbmVlcmluZz8gLS8Vbml2ZXJzaXR5IG9mExlZWRz>

## The engineer making wind energy more efficient



<https://www.youtube.com/watch?v=fdbH7VERTuU&pp=ygU2VGhllGVuZ2luZWVvIG1ha2luZyB3aW5kiGVuZlJneSBtb3JlIGVmZmljaWVudCAtIDFEdWUUpv>

## Useful Websites

[nationalcareers.service.gov.uk/job-profiles/structural-engineer](https://nationalcareers.service.gov.uk/job-profiles/structural-engineer)

[Search – UCAS](#)

[Engineering Council \(engc.org.uk\)](https://engc.org.uk)

[Young people | EDT \(etrust.org.uk\)](https://etrust.org.uk)

[What is a structural engineer? - The Institution of Structural Engineers \(istructe.org\)](https://istructe.org)

[About our Sixth Form – Bourne Academy](#)