



Suffolk Joint
Construction
Committee

Structural Engineer

Structural engineers design and supervise construction projects - mainly (but not limited to) buildings. They work closely with Architects and other members of the project team to structure the building in terms of materials and behaviour under forces.

THE ROLE

As designers and innovators, structural engineers work with a fusion of design, maths and physics to evaluate what buildings should be constructed from - for example - steel, timber, concrete, masonry and glass.

They decide how buildings should be constructed in relation to their use, whilst maintaining the forms and aesthetics prescribed by clients and Architects, within cost budgets and also working to high levels of sustainability.

Structural engineers need to have a good grounding in maths and physics, need to be good at working as part of a team and have the skills to communicate ideas, designs and thoughts as well as listening to clients and other members of the project team.

SALARY EXPECTATIONS

A structural engineer trainee can earn between £12,000 and £16,000 a year

A graduate engineer can earn between £22,000 and £28,000 a year

Senior structural engineer can earn between £40,000 and £50,000 a year

CAREER PROGRESSION

GRADUATE
ENGINEER

ENGINEER

SENIOR
ENGINEER

PRINCIPLE
ENGINEER

Structural Engineer

OPPORTUNITIES

Structural Engineers will work on projects such as:

- **Public** - schools, hospitals, community buildings
- **Commercial** - high rise offices (skyscrapers), buildings projecting high levels of corporate image
- **Residential** - large bespoke houses, high rise apartments, large scale housing development
- **Industrial** - large warehousing and manufacturing buildings - minimal internal obstructions
- **Infrastructure** - bridges, terminal buildings
- **Offshore** - platforms
- **Geotechnical** - foundations for all buildings, basements, specialist piling.

ENTRY ROUTE

- Bachelor's degree or Master's degree in Civil Engineering.
- Full time employment with part time Civil Engineering/ degree apprenticeship
- A good understanding of maths and science
- An eye for design and a mind for critical thinking - design is not just looking good, it has to be fit for purpose. The process of a build can involve a lot of problem solving to get to the perfect design for the client

- The ability to communicate effectively. Often you will have to liaise with the client, statutory bodies, professional bodies, contractors, general public and many others to get the build right for everyone
- Organisational skills, and working to deadlines are very important

TYPICAL TASKS FOR A STRUCTURAL ENGINEER:

- Design work and using Computer Aided Design (CAD) and Building Information Management (BIM)
- Structural analysis and calculations - now mostly computer based
- Critically judging costs, time and labour requirements
- Attending meetings with design team, clients and contractors
- Managing and monitoring progress during a project
- Data Analysis
- Site surveys, testing and assessing load paths
- Assessing risks

For more information on becoming a structural engineer visit:

www.goconstruct.org
www.istructe.org
or talk to your local college

Your career journey starts here!

