

Just the Job Information Sheet

Job title Civil Engineering Technician

Job description

Civil engineering technicians are responsible for planning and drawing the technical details for civil infrastructure such as roads and highways, railways, bridges, pavements and footpaths, river engineering and water/wastewater systems. They may work on new build infrastructure and repairs/maintenance of existing infrastructure.

The role of civil engineering technician is extremely varied, and involves a mixture of office and site work. Roles and responsibilities may include:

- Surveying and measuring sites.
- Making detailed drawings using computer-aided design (CAD) software.
- Preparing plans for construction, such as costings and timetables.
- Writing detailed building-assembly or process instructions and specifications.
- Checking work done by contractors, and reporting on progress.
- Identifying, reporting and discussing problems with engineers.
- Liaising with clients, contractors and subcontractors and members of the public.

Civil engineering technicians are in high demand, with the job role listed on Immigration New Zealand's long-term skill shortage list. Job opportunities are available around the country, especially in Christchurch where skilled engineering technicians are required for the rebuild.

Qualifications required

To become a qualified civil engineering technician you need to complete a New Zealand Diploma in Engineering (NZDE) (Civil). This qualification takes two years of full-time study to complete at an accredited university or polytechnic.

To gain entry into the New Zealand Diploma in Engineering (Civil), it is recommended that you have a minimum of 48 NCEA credits at Level 2 in four subjects, including at least 12 credits in mathematics. Physics is also highly recommended, and technology subjects may be useful.

On completion of the NZDE (Civil) and once in employment, civil engineering technicians can work towards completing the New Zealand Diploma in Engineering Practice (NZDEP).

Together, the two qualifications lead to certification as an engineering technician with the Institution of Professional Engineers of NZ (IPENZ).

General requirements

A competent civil engineering technician is:

- Good at problem-solving.
- Organised and responsible.
- Practical, methodical, and accurate.
- Able to make good judgements.
- Able to work well under pressure.
- Physically fit and healthy.

Experience of working in the engineering or building and construction industry, working with tools and machinery, and draughting are also useful.

Training costs

Costs for the NZDE (Civil) vary depending on the university or polytech. Visit the relevant website for further details.

The NZDEP (Civil) costs \$1,500 + GST, and costs may be covered by your employer. For further information go to www.connexus.org.nz

Career path

There are great opportunities for career progression for civil engineering technicians.

On successful completion of the NZDE and NZDEP (Civil) it is possible to progress to a degree in engineering.

On completion of a three year degree – usually a Bachelor of Engineering (BEngTech) – you may become an engineering technologist.

To become a professional engineer you will need to complete a four year degree – either a Bachelor of Engineering or Bachelor of Engineering (Honours).

Salary range

Civil engineering technicians with 1-5 years' experience are likely to earn between \$50,000 and \$70,000 a year.

Senior technicians are usually on a minimum salary of \$80,000 a year.

Professional engineers with a Bachelor degree can earn in the region of \$50-60,000 a year (graduates), \$65-95,000 (mid-level engineer), or \$85-200,000 (senior civil engineers working as team leaders or managers).

How to increase the chances of successfully entering this industry

To increase the chances of being selected during the recruitment process, candidates should research the industry and have a full understanding of what the job entails.

NCEA credits in maths, science and technology subjects are preferred.

A good way to gain industry experience is to approach local employers to see if you can gain a work placement. A cadetship with an engineering firm is also a great way to gain experience.

Other places to source information about this job

NZ Board of Engineering Diplomas – www.engineer.org.nz

Futureintech - www.futureintech.org.nz

Institute of Professional Engineers NZ (IPENZ) - www.ipenz.org.nz

Connexus (the Industry Training Organisation) – www.connexus.org.nz