

CIVIL ENGINEERING: BUILD A CAREER TO BE PROUD OF



Have you ever wondered how bridges stand the test of time? Or how clean water comes out of our taps? Then you have been thinking about civil engineering. Civil engineering deals with the design, construction, and maintenance of the physical and naturally built environment. In Jersey, this includes public works such as roads, sea defences, cliff reinforcements, harbours and the airport, sewerage systems, pipelines, and structural components of buildings. Globally, civil engineers work on railways, bridges, dams, canals and stadiums. The breadth of opportunity within the engineering industry is vast and we want to give you an insight into the rewarding, life-changing and creative potential a career in civil engineering in Jersey can bring.

Firstly, what does a civil engineer really do?

Civil engineers are constantly solving problems, generating ideas and interacting with lots of different kinds of people. Many engineers develop high-level management skills during their career and go on to become successful project managers. It is a very rewarding career, not just in terms of salary, but also job satisfaction and often includes international travel. Engineers work on projects such as creating flood defences, producing clean energy, building new structures, boring tunnels, designing earthquake-proof homes or planning new transport systems, many of which stay around for decades, if not centuries, making a lasting impression in the world.

As well as project managers and designers, there are many career routes to explore within the industry, including technical specialisms such as geology and geotechnics, technicians, site engineers, marine engineers and more.

Why become a civil engineer?

As infrastructure demands grow across the world, the need for highly skilled civil engineers is vast. Here in Jersey, the demand is equally great as the island's infrastructural needs grow and modernise. Engineering companies are always on the lookout for potential new trainees to begin a career in this fast-growing industry so employability is considered high. The civil engineering industry in Jersey is busy with many interesting projects, such as creating the infrastructure for large new buildings, marine projects around the harbour and coastal defences, as well as the major infrastructure project at Elizabeth Terminal and the new sewage works at Bellozanne. The industry is responsible for works that most people will never see, such as the power station and sewage treatment works; the Cavern, which is a huge underground water storage facility under Snow Hill car park; and the incinerator.

Worldwide, engineers designed and built the world's tallest building, the Burj Khalifa in Dubai, plus every stadium and bridge you have ever seen!



Who would suit becoming a civil engineer?

Anyone with an interest in buildings, structures, design, architecture and the physical environment would suit a career in civil engineering. Qualifications and aptitude in mathematics, physics and ICT are also required to deal with, and find solutions to the complex problems that arise. So if you enjoy problem solving, this could be the career for you.

The industry is keen to attract more female members. According to the Women's Engineering Society (UK); "2017 surveys indicate 11% of the engineering workforce is female. This is a positive change from the 9% in 2015. On the other hand the number of women registered engineers and technicians (i.e. CEng, IEng, EngTech has dropped from 6% to 5% of total".

How could I become a civil engineer?

To commence training as a civil engineer in Jersey, you must first secure employment with a local engineering company who will provide the environment for you to begin building your career. From there, you will have the chance to join the two year, Level 4 Higher National Certificate (HNC) in Civil Engineering at Highlands University College Jersey (UCJ), delivered as a day-release apprenticeship programme, in partnership with the Trackers Apprenticeship programme, a *Government of Jersey* initiative, which covers the cost of the course, together with the employer.



What qualifications do I need to become an apprentice?

If you're a school leaver and aged 18 or over, you must hold **one** of the following qualifications:

A GCE Advanced Level profile

A BTEC Level 3 qualification in Construction and The Built Environment

An Access to Higher Education Certificate awarded by an approved further education institution

Another related Level 3 qualification

Plus

A-level (EEE) or level 3 qualifications worth 48 UCAS points (must include Maths and Physical science).

5 GCSEs (A-C) including Maths and English or equivalent (reformed GCSEs grade 4 or above).

How do I become a fully qualified civil engineer?

On successful completion of the HNC Level 4 qualification, candidates can progress

onto degree level qualifications via London Southbank University, in partnership with UCJ, who are working on providing a new degree provision, which they hope to be made available for 2020.

The Channel Islands Group of Professional Engineers (CIGPE) is the representative body for the professional engineering institutions in the Channel Islands and invite new members who are working in the industry to join and attend regular events, lectures and networking opportunities.

*Please note, The BTEC Level 4 HNC is proposed to commence in September 2019 and is subject to enrolment numbers. Highlands College reserve the right to cancel any programme in the event of the required applicant numbers not being met. In the event of the course not going ahead this year, it would then look to run in 2020, by which time, candidates could have over a year's experience already working in the industry, giving them a stronger understanding of the course.

For more information contact:

Trackers@gov.je

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www.highlands.ac.uk (search 'Civil Engineering' in the course list)

Case Study: James Runacres, Apprentice Civil Engineer, Geomarine Limited



Who do you work for and what is your role?

I work for Geomarine, a civil engineering contracting company. I work in all aspects of the company from installation of services to rope access and construction of new structures.

What made you decide to undertake an apprenticeship in Civil Engineering?

I decided to do the apprenticeship after I saw an advertisement for it and after looking into it and seeing the opportunities available I thought I couldn't just ignore it.

What's the best thing about your job?

The best bit about what I do is working as a team and knowing that I can always ask for help if I want it, and also being able to help less experienced people learn new skills.

What is it like to study and work at the same time? Best thing / worst thing?

Being able to work and study at the same time isn't easy and there are definitely times where I question what I'm doing, but support is always there. In the end, I'll have a degree in civil engineering but better than that I'll have loads of experience so will be in a better position than someone who's fresh out of uni and has no experience.

Any tips for new apprentices?

Make sure that civil engineering is something that really interests you, and something you want to do. The most important thing is not to get stressed out and take time out to do something you enjoy.

What are your goals for the future?

My future goals are to complete my degree in civil engineering and hopefully become a senior on-site engineer who can continue to work as a team and problem solve.

