Waipapa
Taumata Rau
University
of Auckland



Civil Engineering

LEARN MORE

Civil Engineering involves the technical, social, cultural, and environmental aspects of the design, planning and construction of our built environment.

Offered by our Department of Civil and Environmental Engineering, this specialisation may suit you if you are interested in design and construction, the planning and management of infrastructure networks, and creating more sustainable, resilient communities.

You'll learn to develop creative solutions to challenges such as natural hazards, post-disaster recovery, and adaptation to climate change, while also exploring how to reduce the social, cultural and environmental impacts of our growing population.

Te Herenga Auaha, Faculty of Engineering and Design

ENVIRONMENTAL ENGINEERING

Environmental engineers design, develop, and manage systems to treat waste, limit pollution, and protect air, land and water resources. This ensures that infrastructure and developments are sustainable and responsible. They also design products and processes that have less environmental impact, promoting cleaner production and resource efficiency. As a student studying environmental engineering, you'll learn how to develop solutions that reduce our impact on the natural world.

GEOTECHNICAL ENGINEERING

Geotechnical engineers investigate ground conditions and design the foundations that support buildings, bridges, tunnels, and retaining structures. Their work ensures safety and stability in all types of terrain and conditions. You'll learn how to understand and work with the ground beneath us, from soil and rock to seismic hazards.

TRANSPORTATION ENGINEERING

Transport networks are the socioeconomic backbone of society, enabling the movement of people and goods across the country. Through engagement with real-world challenges, you'll learn how to plan, design, construct, operate and manage transport networks such as road, rail and cycleways for safe, efficient and convenient movement of people and goods, while engaging with emerging trends such as electric and autonomous vehicles.

WATER ENGINEERING

Water engineers design systems that deliver clean water, control flooding, and protect coasts and rivers. Their work helps communities adapt to challenges like climate change while maintaining essential services and ecosystems. You'll develop an understanding of the behaviour of coastal and river environments and their interactions with the built environment, allowing you to manage water as both a resource and a force of nature.

CONSTRUCTION ENGINEERING AND MANAGEMENT

Construction engineers coordinate people, materials, and technology to bring infrastructure to life. Here you'll learn the practical skills to plan, manage and deliver complex engineering projects. From roads and bridges to large-scale developments, you'll learn to ensure projects are completed efficiently, safely and to specification.

STRUCTURAL ENGINEERING

Structural engineers apply mechanics and creativity to develop solutions that support the built environment from housing to high-rise, including the development of new design approaches. Within structural engineering you'll learn how to design and assess new and existing buildings and infrastructure assets that are strong, durable and safe, including performing under earthquake loading.