

## Auckland and New Zealand

As the largest city in New Zealand, Auckland is famous for its beautiful location, relaxed and easy going lifestyle and great facilities. It is also vibrant, exciting, and multicultural - with sizeable communities of people from many different countries (particularly from Asia and the islands of Polynesia), and is frequently listed as one of the most liveable cities in the world.

Sitting astride an isthmus, it has harbours which open to both the Tasman Sea and Pacific Ocean, many beaches in and around the city and easy access to the islands and stunning landscapes of the surrounding area. Auckland is known as the "City of Sails" and is renowned for water sports and outdoor activities.

New Zealand's relatively small size means that it is easy to get out and explore the huge variety of geographies and scenery that make it one of the most interesting countries to visit. Adventure activities of all types (eg, hiking, skiing, fishing, boating) are a speciality and are very accessible for all.



*Auckland City, one of the most livable cities in the world.*

## The University of Auckland

The University of Auckland is New Zealand's leading and largest university. It is ranked in the top 100 of the QS World University Rankings and is the highest ranked New Zealand University in the Times Higher Education and Shanghai Jiao Tong Academic Ranking of World Universities. The University of Auckland is an international centre of learning and academic excellence. It is New Zealand's pre-eminent research-led institution and has key linkages with many of the world's top research intensive universities.

The University's mission is to be a research-led, international university, recognised for excellence in teaching, learning, research, creative work and administration.



*Clock Tower, The University of Auckland.*

### Apply online

[www.auckland.ac.nz/applynow](http://www.auckland.ac.nz/applynow)

### Where to find further information?

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Postgraduate Certificate in

## Geothermal Energy Technology



# Introduction

Demand for renewable energy is on the rise and is a priority for governments and energy companies globally.

The scope for development of geothermal fields is large and many countries are seeking to move away from fossil fuel power generation for both economic and environmental reasons.

Global revenues for geothermal power were estimated by international research company Frost and Sullivan at more than USD 1.16 billion in 2010. They predict that this revenue will grow more than fivefold to USD 5.89 billion in 2017. Now is a great time to get involved with this dynamic industry.



*Wai-o-tapu Thermal Wonderland, Rotorua.*

## Why this programme?

The Postgraduate Certificate in Geothermal Energy Technology is a highly practical and applied qualification which has been designed to train participants in key aspects of developing geothermal energy fields.

The course content draws on recent advances in technology and leading edge research and uses experts from academia and industry as lecturers and tutors.

New Zealand has been at the forefront of geothermal research and training since the world's first liquid-dominated high temperature geothermal power plant was installed at Wairakei, in the central North Island, more than 60 years ago. Today, there are more than 25 such systems operating in the country.

More than 1450 students from more than 50 countries have graduated from The Geothermal Institute at The University of Auckland with a world recognised qualification; many of our graduates are now leaders in the geothermal industry world-wide.

Students find the nine days on field trips a memorable experience and particularly beneficial.

## Where will it take you?

This programme offers the opportunity to learn specialist skills which are in demand globally.

Graduates are currently involved in all aspects of the industry – ranging from prospecting for new sites through to building geothermal plants, in countries as diverse as Iceland, Chile, Indonesia, the Philippines, and the United States. Graduates of this programme also have the option to further their studies via the Master of Energy degree offered by the University.

## Who should take this programme?

Anybody with a suitable undergraduate degree in Engineering or Science who wishes to learn highly relevant and applicable skills in this exciting and growing industry.

For more details, go to:

[www.engineering.auckland.ac.nz/pgcertgeothermtech](http://www.engineering.auckland.ac.nz/pgcertgeothermtech)

## Programme outline

The postgraduate certificate is run through the Geothermal Institute within the Faculty of Engineering at The University of Auckland and consists of three courses and a project. It covers geothermal science and technology, engineering, geoscience and field studies.

## Duration

The postgraduate certificate is run over one semester (usually from July to November) and is followed by the New Zealand Geothermal Workshop ([www.geothermalworkshop.co.nz](http://www.geothermalworkshop.co.nz)).

## Compulsory courses

GEO THERM 601 - Geothermal Resources and Their Use

GEO THERM 602 - Geothermal Energy Technology

GEO THERM 689 - An industry focused research project –

## Elective courses

either GEO THERM 603 - Geothermal Exploration

or GEO THERM 620 - Geothermal Engineering

(For course details, visit [www.engineering.auckland.ac.nz/pgcertgeothermtech](http://www.engineering.auckland.ac.nz/pgcertgeothermtech) or contact the University to speak with a postgraduate course advisor).

## Field trips

A highlight of the programme are the two field trips to the Taupo Volcanic Zone. Students visit geothermal power plants, direct-use projects and several undeveloped geothermal fields. These field trips will enable students to gain practical experience in collecting field data and making measurement of geothermal wells.



*Students on a field trip.*

## Teaching

The programme is taught by lecturers from the Department of Engineering Science, School of the Environment, and the Institute of Earth Science and Engineering. Additionally there are guest lecturers from the New Zealand geothermal industry.

## International students

The University of Auckland welcomes international students and there are more than 5000 currently enrolled. Many live on or around the city campus where the Faculty of Engineering is located. These students, from many different countries and cultures, provide an interesting and dynamic cross-cultural environment which most students enjoy. Additionally, the city of Auckland is particularly multicultural and students find it an easy place to live, work and play.