What can I do with a degree in Financial Engineering

Career planning: what do I need to know?

Knowledge of yourself is important for career decision making. Start by looking at your personal goals, abilities, values and interests to explore study and career options that are relevant to you. Some of these may change over time, so it is important to self-reflect and evaluate your career on an ongoing basis.

What do employers look for?

Many employers look for generic skills such as communication, customer-focus, bicultural competence, cultural awareness and teamwork. With technology and globalisation changing the nature of society, skills such as resilience, problem solving and adaptability are valuable at work as well as in life.

How can I develop these skills?

- Some skills are developed through your degree
- Extra-curricular activities can help, for example getting involved in clubs, mentoring, cultural groups, part-time work, or volunteering
- Be open to professional and personal development opportunities. Whether it is undertaking an internship, overseas exchange, skills seminar, or joining an industry group — these activities will enhance your employability.

What else should I know?

The career options in this brochure are examples only and the list is not exhaustive. Some careers may require further study beyond a first degree or additional work experience. Some pathways and degrees have a recommended school background. Find more subject details at
💻 www.canterbury.ac.nz/subjects/financial-engineering

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AT A GLANCE

1st Aotearoa New Zealand's first university to o er Financial Engineering programmes

16 stock exchanges in the world that are a part of the "$1 Trillion Club" and have a market capitalisation of over US$1 trillion each

$100k $150k is the salary range for a qualified and experienced actuary*

What skills will UC graduates gain?

Financial Engineering graduates develop a valuable set of skills that include:

- Applied financial, mathematical and statistical problem-solving skills
- Strong quantitative and analytical abilities
- Programming skills
- Ability to critically review new information
- Ability to design and develop a new financial product, instrument or investment strategy
- Communication
- Teamwork.

Where might graduates be employed?

There is currently an employer demand and international growth in financial engineering and related fields like the wider actuarial and business analytics industries.

Employers range from private industries, such as banking, investment, capital industries, security, data analysis, risk management and insurance, to the public sector (eg, the Reserve Bank, Treasury or regulatory bodies).

Past graduates of the contributing departments from related paths of study have been employed by Macquarie Capital, Deloitte, BNY-Mellon, First NZ Capital, Reserve Bank of New Zealand, Vero Insurance, Wynyard Security Group and many government agencies such as the Treasury, Statistics New Zealand and the Ministry of Business, Innovation and Employment.

With global demand increasing apace, there are significant opportunities for New Zealanders to work abroad as a financial engineer.

* www.careers.govt.nz

What jobs and activities could graduates do?

Financial Engineering graduates are ready for the international workplace in the finance and analytics industries. Financial engineers could be involved in derivatives pricing, financial regulation, corporate finance, portfolio management, risk management, trading or structured products .

Note: Some of the jobs listed may require postgraduate study. See the 'Further study' section.

Examples:

Financial engineer

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Useful links

Te Rōpū Rapuara UC Careers
💻 www.canterbury.ac.nz/careers

Careers New Zealand
💻 www.careers.govt.nz

Nicholas

Bachelor of Science in Financial Engineering and Statistics
Bachelor of Science with Honours in Computational and Applied Mathematical Sciences
Research Assistant, Te Pūnaha Matatini

What attracted you to Financial Engineering?

The wide range of courses in the Financial Engineering degree was the biggest draw. I knew I wanted to study some form of mathematics/statistics at university, and Financial Engineering allowed me to tie in some Computer Science, Finance, and Economics. The Statistics major followed naturally as it strengthened the quantitative aspect of my degree.

It provides an awesome range of subjects that I couldn't get any other way. They all relate to each other more than I expected. Taking the courses in this way provides insights you wouldn't have if you just took one subject. This means you have to cover a lot of background material to stay up-to-date in all subjects.

Tell us about some of the skills you used in your work experience:

We used techniques learned in econometrics and data mining to help World Vision plan and allocate their time in schools more effectively. Using tools from class in the real world allowed us to truly understand how our theoretical knowledge is actually applied to real problems.

What did you do during your PACE course in Thailand?

Here I worked in a small (but rapidly growing) business, using my statistical, machine learning, and computer science knowledge to automate internal report generation. This saved them significant time as they no longer needed to hand-prepare these reports. There was also the opportunity to introduce some more "intelligent" systems, such as internal connection suggestions, to keep them ahead of their competition.

How has your study been useful out in the field?

Employers in the financial sector are usually looking for strong quantitative skills. Taking a double major with Financial Engineering and Statistics (or Mathematics) is pretty ideal.

Read more online

Read more stories about our students' university experiences online. UC alumni make a difference in varied ways around the globe. To find out where graduates are now visit 💻 www.canterbury.ac.nz/getstarted/whyuc/student-profiles

The information in this brochure was correct at the time of print but is subject to change.

More information

UC students seeking study advice.

Te Kura Pāngarau |
School of Mathematics and Statistics

The School is made up of specialists in Data Science, Financial Engineering, Mathematics, and Statistics. Courses within the School are able to be studied alongside other subjects and staff invite students to come and discuss their study programme and goals.

T: +64 3 369 2233
E: enquiries@math.canterbury.ac.nz

💻 www.canterbury.ac.nz/engineering/schools/mathematics-statistics

Anyone seeking careers advice.

Te Rōpū Rapuara | UC Careers

UC offers intending and current students and recent graduates a wide range of services, including individual career guidance, seminars, career resources and student and graduate employment opportunities.

T: +64 3 369 0303
E: careers@canterbury.ac.nz

💻 www.canterbury.ac.nz/careers

Prospective students seeking study advice.

Te Rōpū Takawaenga | Student Liaison

The liaison team provide advice to future students who are starting their degree for the first time. They can assist with information on degrees, scholarships, accommodation, and other aspects of university life. We have offices in Christchurch, Auckland and Wellington.

Ōtautahi | Christchurch
T: 0800 VARSITY (0800 827 748)
E: liaison@canterbury.ac.nz

Tāmaki Makaurau | Auckland
T: 0800 UCAUCK
E: auckland@canterbury.ac.nz

Te Whanganui-a-Tara | Wellington
T: 0800 VARSITY (0800 827 748)
E: wellington@canterbury.ac.nz

💻 www.canterbury.ac.nz/liaison

UC | Te Rāngai Pūkaha Engineering