# I want to be an Engineer

With innovative and creative abilities, engineers are vital in our increasingly complex technological world.

> "I don't spend my time pontificating about high-concept things; I spend my time solving engineering and manufacturing problems."

> > - Elon Musk

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### Sample study plan

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Foundation Studies Programme

Delivered by University of Auckland International College (UOAIC)

### Duration:

- 6 months
- 8-9 months
- 12 months

The UoA Foundation Studies Programme ensures you not only meet University of Auckland undergraduate course entry requirements but that you are fully prepared for the challenges of degree-level study. Bachelor of Engineering (Honours)

Delivered by University of Auckland Duration: 4 years

Become part of a community that plays a role in improving our future – blend theory and practice to contribute to an increasingly technologically advanced, sustainable world.



### Registered Engineer

### **Career opportunities**

- Aeronautical Engineer
- Agricultural Engineer
- Biomedical Engineer
- Building and Construction Manager
- Chemical Engineer
- Civil Engineer
- Electrical Engineer
- Electronics Engineer
- Environmental Engineer
- Geologist
- Mechanical Engineer
- Mining Engineer
- Petroleum Engineer
- Project Manager
- Software Engineer
- Telecommunications Engineer

The University of Auckland Certificate in Foundation Studies (Level 3) is delivered by UP International College New Zealand Limited trading as University of Auckland International College on behalf of the University of Auckland.

### Employability

### Estimated median base income by career stage

Graduate	\$60,000
Independent Practice	\$85,000
Team Leader	\$110,000
Technical Manager	\$140,000
General Manager	\$180,000

Structural engineers are in high demand in both New Zealand and overseas as ageing infrastructure needs replacing, economic and technical conditions change, and the need to rectify human harm to the environment becomes critical. They can work in both public and private sectors.

**Biomedical engineers** often gain employment in biomedical companies, research facilities, hospitals and government regulatory agencies.

**Chemical and materials engineers** often gain employment in dairy and food, pharmaceuticals, paper and pulp, petrochemicals, energy processing and production, and mineral processing industries.

**Civil and environmental engineers** will find opportunities in state-owned enterprises, in regional and district councils and as an engineering contractor or consultant in the private sector.

**Computer Systems engineers** will find opportunities in multinational computer companies, consultancy firms, the telecommunications industry and in the R&D teams of companies in a multitude of sectors.

**Electrical and Electronic engineers** will find opportunities in roles relating to communications, wireless computing technologies, electronics, instrumentation, power electronics and motorcontrol.

**Engineering scientists** will directly contribute to your professional versatility. Graduate could end up developing software, modelling production processes for a large manufacturer, or a management position with a bank.

Mechanical engineers will find opportunities in the manufacturing or transport industries, or in large-scale plants that produce things like wood pulp, dairy products, meat, steel, petroleum and electricity.

Mechatronics engineers will find opportunities in a wide range of jobs that involve the design and improvement of high-tech products, such as home appliances, medical devices and machine tools.

**Software engineering** graduates could end up in virtually any company and manage their information storage and sharing technologies.

### **Engineering Specialisations**

UoA's ten Bachelor of Engineering (Honours) specialisations are **accredited by Engineering New Zealand**, a signatory of the Washington Accord. This makes it a recognisable engineering qualification in many countries.

- Structural Engineering\*
- Biomedical Engineering
- Chemical and Materials Engineering
- Civil Engineering\*
- Computer Systems Engineering
- Electrical and Electronic Engineering
- Engineering Science
- Mechanical Engineering
- Mechatronics Engineering
- Software Engineering

### \*Top 50 in the QS World University Subject Rankings 2022



<sup>1</sup>QS Graduate Employability Rankings, number one in New Zealand and 68th worldwide in 2022 <sup>2</sup>OS World University Rankings by Subject 2022



### Student testimonial

"I think university is less about what you learn, but more about how you learn. The University of Auckland exposed me to a broad range of subjects, even within a single specialisation. Throughout the course of my degree, I've studied Aerodynamics, Thermodynamics, Vibration, Mathematical Modelling, Control Systems, Engineering Design and more. It's unlikely that there is any single job that requires the use of all of them, but they taught me skills that are greatly beneficial – from an understanding of fundamental physical principles, to analysis, communication and teamwork."

### Correy Tong, University of Auckland Graduate

Qualification: BE(Hons) with First Class Honours

Major: Mechanical Engineering

Current role: Product development engineer at Fisher & Paykel Appliances

Overview

## Bachelor of Engineering (Honours)

### Why choose Engineering

If you enjoy working with people, designing solutions to problems, and using your skills to make a difference in the world, an engineering degree could be the right choice for you.

As New Zealand's leading Engineering faculty\*, University of Auckland is home to over ten research units and centres – including the Geothermal Institute, the Creative Design and Additive Manufacturing Lab, and the Centre for Automation and Robotic Engineering Science – all of which produce world-class research.

You'll be surrounded by people who are excited to push boundaries, improve lives and learn from each other.

\*QS World University Rankings by Subject 2022

### What you'll learn

The BE(Hons) is split into four 'Parts' that correspond to your year of study.

In Part I, you will be exposed to our nine available specialisations and study a broad base of engineering and professional fundamentals.

Parts II, III and IV are customised according to your chosen specialisation. Along with your specialisation courses, you will study a common core of mathematical modelling, technical communication, and professional development. You will also pursue elective courses to explore the topics that interest you the most. Your specialisation, personal interests and chosen electives can impact what you pursue.

Programme type	Accelerated	Fast-Track	Standard	Foundation Connect**	
Duration	6 months	8-9 months	12 months	6 months	
Tuition fees*	\$24,000 NZD	\$32,000 NZD	\$32,000 NZD	\$15,990 NZD	
Application fee	\$400 NZD	\$400 NZD	\$400 NZD	\$400 NZD	
2023 Start dates (incl. Orientation)	13 February, 31 August	26 April, 2 October	13 February, 10 July	13 February, 26 April, 10 July, 2 October	
English language requirements	IELTS 6.0 (no band less than 5.0) Or other accepted equivalents including the UP English Language Test (UPELT)	IELTS 5.5 (no band less than 5.0) Or other accepted equivalents including the UP English Language Test (UPELT)	IELTS 5.0 (no band less than 4.5) Or other accepted equivalents including the UP English Language Test (UPELT)	IELTS 4.5 (no band less than 4.0) Or other accepted equivalents including the UP English Language Test (UPELT)	
International entry requirements	IB: Y1: 4 x grade 5 Y2: >20 CIE: 2 B grades and 2 A grades	IB: Y1: 2x grade 4 + 2x grade 5 CIE: 4 B grades	IB: Y1: 4x grade 4 CIE: 2 B grades and 2 C grades	IB: Y1: 2x grade 4 + 2x grade 3 CIE: 2 C grades and 2 D grades	

### The University of Auckland Certificate in Foundation Studies (Level 3)

\*The tuition fees quoted above are in \$NZD and are correct at the time of publication (30 November 2022). Visit **internationalcollege.ac.nz** \*\*Students starting with Foundation Connect will pay the Resource (\$400), Exam (\$350) and Application (\$400) fees once and will not be charged again upon progression to Foundation.

### **Degree Progression Requirements**

Minimum academic and English language requirements for guaranteed entrance into undergraduate study from the University of Auckland Certificate in Foundation Studies. Effective for students applying for entry to the University of Auckland in 2023-2024.

Programme	Intakes	GPA	Minimum Duration (Years)	Minimum English language proficiency	Additional Requirements
Bachelor of Engineering (Honours)	March, July (July intake subject to availability)	5.0	4	70% (B grade) in English (EAP)^	Calculus and Physics.

^If 70% (B grade) in EAP is not achieved an acceptable alternative is 50% in EAP with a valid IELTS overall score of 6.5 and no bands below 6.0



### Scholarships

### Undergraduate scholarship

Upon successful completion of the Foundation course, the University of Auckland awards the top 2 students of each semester with a Top Achievers Award, which is a \$5000 scholarship on first year tuition fees.

### Foundation scholarship

High Achieve Awards of up to \$5,000 are competitively assessed and only awarded to students who demonstrate exceptional academic performance in their previous studies. Students will need to undergo an interview with our Regional Representative to have their eligibility assessed.

### **Foundation Connect scholarship**

Student who successfully progress from Foundation Connect programme to Standard Foundation programme will be awarded a scholarship if they achieve top results. The scholarship of up to \$5,000 NZD will be awarded depending on their final grades.

For more information, please visit: https://www.internationalcollege.ac.nz/scholarships/



Scan to learn more about Additional Fees, Academic Requirements and Scholarships



### International College Kāreti ki te Ao

Find out more at: internationalcollege.ac.nz