SCIENCE

UNDERGRADUATE
PROGRAMME GUIDE
2022

AUT

TOP 1% UNIVERSITIES WORLDWIDE

AUCKLAND UNIVERSITY OF TECHNOLOGY

FIND YOUR GREATNESS

TICIANA FETTERMANN
MARINE BIOLOGIST
AUT GRADUATE

At AUT we know that all of our students arrive with so much potential. It's our job to help them unlock that potential and use it to find the greatness within them. For many of our graduates, it was an influential lecturer, a conversation with a student mentor, or an educational experience inside or outside the classroom that gave them clarity and opened up new possibilities.

Some of our great graduates now share their stories of how their time at AUT helped them uncover what drives them and inspired them to turn that passion into something rewarding and meaningful.

aut.ac.nz/great-graduates

Welcome to AUT

E ngā mana, e ngā reo
E te iti, e te rahi
E ngā mātāwaka o ngā tōpito o te ao
Ngā mahuetanga iho e kawe nei i ngā
moemoeā o rātou mā
Tēnā koutou katoa

Piki mai rā, kake mai rā,
Nau mai, haere mai ki tēnei o ngā wānanga
Whakatau mai i raro i te korowai āhuru
o Te Wānanga
Aronui o Tāmaki Makau Rau

To the prestigious, the many voices
The few, the great
To those of all races and creeds
We who remain to fulfil the dreams and
aspirations of the ancestors
Greetings one and all

Climb, ascend
Embark on the journey of knowledge
Let us at AUT embrace and empower you
To strive for and achieve excellence

Te whakatupu i te kōunga, i te mana taurite me ngā tikanga matatika, i ngā pūkenga ako, i ngā pūkenga whakaako me te āta rangahau hei hāpai i ngā hāpori whānui o te motu, otirā, o te ao.

To foster excellence, equity and ethics in learning, teaching, research and scholarship, and in so doing serve our regional, national and international communities.

Contents

Course information

About AUT

Applying for your programme

Key: F/T = full-time, P/T = part-time

Cover
Top 1%: AUT is ranked in the world's top 251–300 universities (Times Higher Education World University Rankings 2021).

Disclaimer: Although every reasonable effort is made to ensure accuracy, the information in this document is provided as a general guide only for students and is subject to change. All students enrolling at AUT should consult its official document, the AUT Calendar, which is available online at **aut.ac.nz/calendar**, to ensure that they are aware of, and comply with, all regulations, requirements and policies.

International students should visit **aut.ac.nz/international** for entry requirements and detailed application information.
The information contained in this programme guide was correct at the time of print, December 2020.

AUT's faculties and schools

AUT has five faculties and 16 schools. The light green boxes in the diagram below show where the programmes in this programme guide sit within AUT.

FACULTY OF BUSINESS, ECONOMICS AND LAW
TE ARA PAKIHI, TE ŌHANGA ME TE TURE

- Business School
  Te Kura Kaipakihi
- Law School
  Te Kura Ture
- School of Economics
  Matauranga Ōhanga

FACULTY OF CULTURE AND SOCIETY
TE ARA KETE ARONUI

- School of Education
  Te Kura Mātauranga
- School of Hospitality and Tourism
  Te Kura Taurimatanga me te Mahi Tāpoi
- School of Language and Culture
  Te Kura Reo me te Ahurea
- School of Social Sciences and Public Policy
  Te Kura Pūtaiao ā-iwi me ngā Kaupapa Tūmatanui

FACULTY OF DESIGN AND CREATIVE TECHNOLOGIES
TE ARA AUAHA

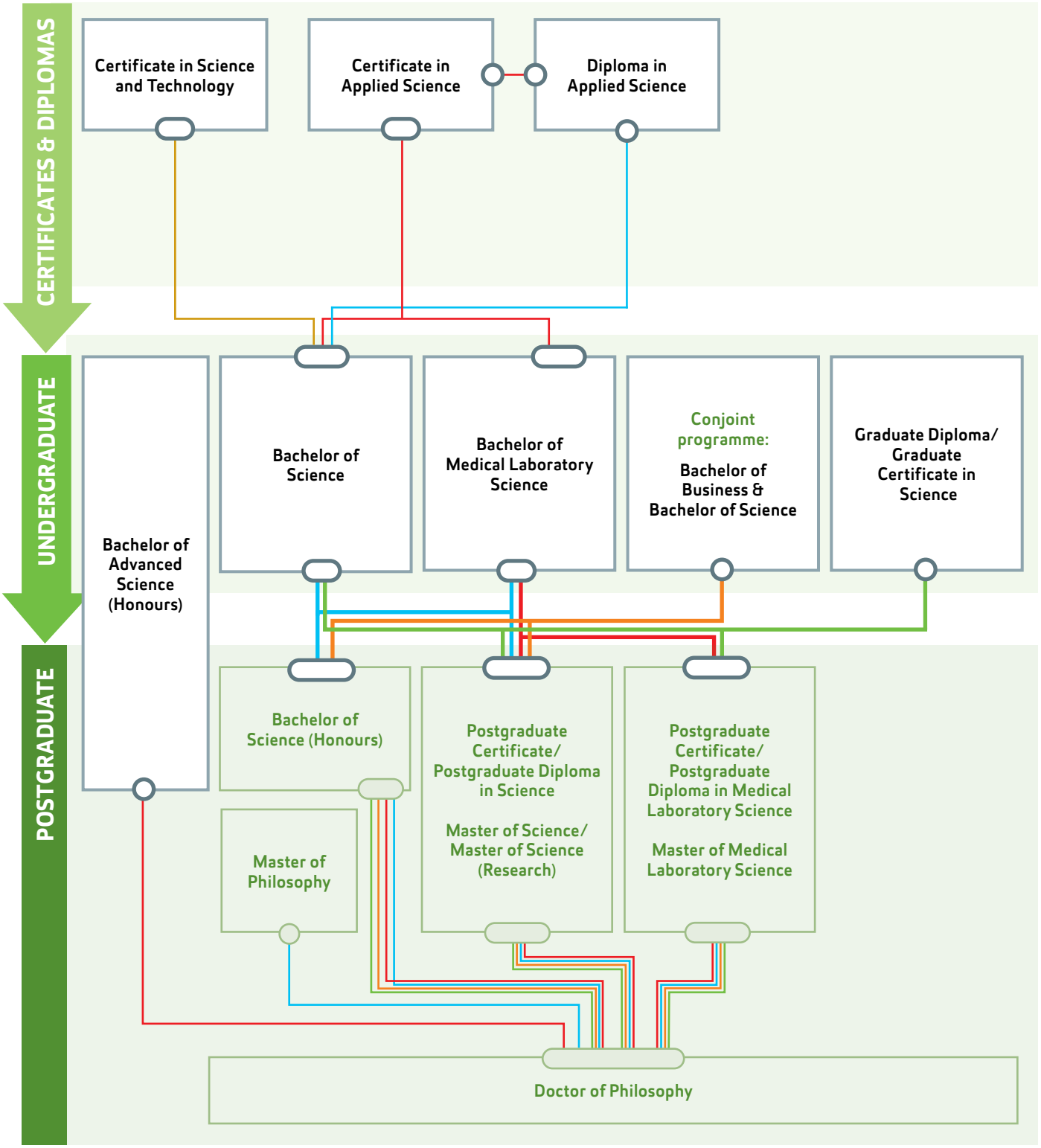
- School of Art and Design
  Te Kura Toi a Hoahoa
- School of Communication Studies
  Te Kura Whakapāho
- **School of Engineering, Computer and Mathematical Sciences**
  Te Kura Mātai Pūhanga, Rorohiko, Pāngarau
- School of Future Environments
  Huri te Ao

FACULTY OF HEALTH AND ENVIRONMENTAL SCIENCES
TE ARA HAUORA A PŪTAIAO

- School of Clinical Sciences
  Te Kura Mātai Haumanu
- School of Public Health and Interdisciplinary Studies
- **School of Science**
  Te Kura Pūtaiao
- School of Sport and Recreation
  Te Kura Hākinakina

TE ARA POUTAMA
FACULTY OF MĀORI AND INDIGENOUS DEVELOPMENT

Qualifications and study pathways



Note:

1) Completion of one qualification doesn't guarantee entry to a higher-level qualification.

2) Apply for the qualification you are best suited for – you don't necessarily have to enrol in the qualification that appears at the top of the above diagram.

3) Some qualifications in the above diagram may be prerequisites to – and not credit towards – higher-level qualifications.

For more information, visit aut.ac.nz/sciences

WHY STUDY SCIENCE?

Study science majors not available anywhere else in NZ

Nationally and internationally recognised lecturers

Get out of the classroom with our science field trips as far as the Antarctic

1 Our annual field trip to the Solomon Islands is one of many ways our students can hone their skills 2 You have plenty of opportunities to apply your skills in our laboratories 3 The AUT City Campus in the heart of Auckland City

A world-class university environment

We're proud to be one of the world's best modern universities – Times Higher Education has ranked us as the top millennial university in Australasia and number 15 in the world. We have been a university since 2000, and are now the second largest in the country and ranked among the top 1% (251–300) of universities in the world. Study science with us and you'll be prepared for rewarding careers in a wide range of industries and professions. If you want a university with future-focused teaching, an engaging learning environment that embraces people and ideas, and programmes designed for rewarding careers – then welcome to AUT.

Creating world-ready graduates

AUT's mission is to create great graduates, and AUT science graduates excel in shaping successful careers in many scientific fields, in New Zealand and around the world. We encourage innovation and entrepreneurship, and the ability to explore new technologies, challenge routine thinking and solve problems in new ways. Through our mentor programme every student also meets regularly with an academic in small groups of five to six students throughout their entire degree. We're also proud of our strong partnerships with key industry organisations like the Department of Conservation, Department of Primary Industries, Auckland Council, New Zealand Antarctic Research Institute, Roche Diagnostics, Fonterra and many more. Our collaborations with employers provide you with invaluable networking opportunities and ensure that your programme is relevant to your career, making it easy to move from your studies to the working world.

Innovative and relevant research

AUT is ranked first in New Zealand for global research impact by Times Higher Education. Our research is focused on key scientific issues of regional and global significance, and our globally renowned researchers are experts in areas as diverse as applied ecology, chemistry, biomedical science and food science. The common theme connecting all of our research is sustainability as it relates to environmental and human wellbeing. You could also conduct your research in close collaboration with our Centre for Food Science or Institute for Radio Astronomy and Space Research. Our research also feeds back into the classroom, and students can contribute to and learn from these research discoveries.

Top facilities and equipment

Our outstanding laboratories include the AUT Roche Diagnostics Laboratory – which has state-of-the-art medical and biomedical testing equipment, and is the only university lab of its kind in New Zealand. To carry out their research and learning, our staff and students have access to top facilities and equipment, often rivalling technology found in large industrial enterprises. For example, AUT was the first university in New Zealand to own and operate a fully auto-piloted unmanned airplane for GIS referencing surveying and 3D modelling. We also have the latest gene sequencing technology available.

Practical experience during your study

AUT science graduates have a reputation for being well-prepared for their career because they not only have a sound theoretical understanding of their discipline but have also developed practical skills that set them apart from other graduates.

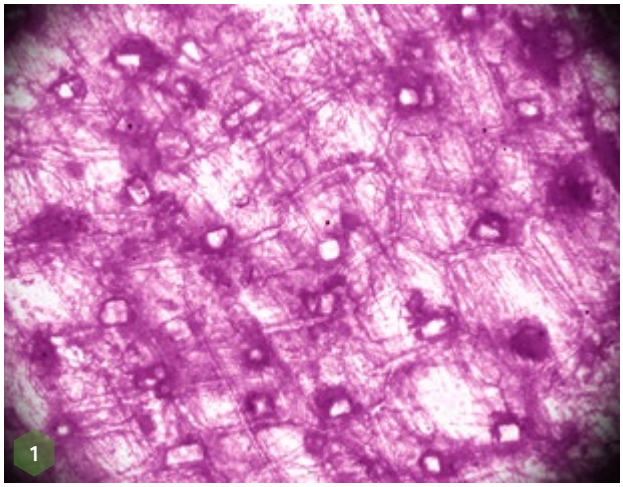
You study in an interactive environment and frequently get out of the classroom to apply your knowledge. You might find yourself diving in the ocean to examine marine life, investigating forest dynamics on Mt Ruapehu, testing food products in our food sensory suite or carrying out analyses in laboratories. There are no fees for our field trips, unlike at other universities[1].

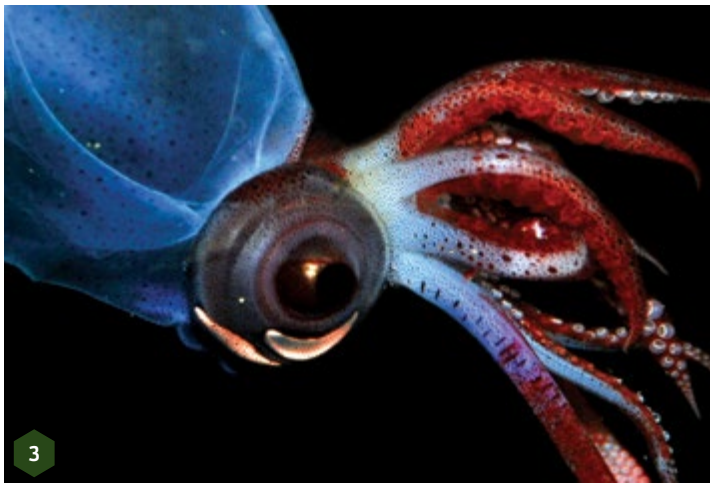
In your final year you might also be involved in an industry placement or work on an industry-related project.

Companies or research organisations involved include:

- AgResearch
- Auckland Council
- Department of Conservation
- District health boards across New Zealand
- Drapac Co. (NZ)
- Future Cuisine Ltd
- Goodman Fielder
- IGENZ
- LabPLUS
- Labtests NZ
- Liggins Institute
- McCowley Enterprises Ltd
- Merit Meats Ltd
- New Zealand Blood Service
- New Zealand Premium Whitebait Ltd
- NIWA
- OceaNZ Blue
- Olivado NZ
- Pathology Associates
- Sanitas NZ
- SCION (Rotorua)
- Tegel
- Thoughtgroup Ltd

1. There are no fees for our field trips, except for the field trip to the Solomon Islands as part of the Pacific Islands Coastal Ecology elective paper.





1 AUT science students have access to advanced technology and labs for research and investigation 2 Astronomy and space science students have access to AUT's hi-tech astronomy facilities 3 The AUT Lab for Cephalopod Ecology and Systematics researches cephalopods (mostly squid) that live in NZ waters 4 Learn in our modern lecture theatre facilities 5 Students at the AUT City Campus in Auckland's CBD 6 & 8 Field trips are an important part of our programmes, including opportunities to go out on AUT's custom-made boat or outings to study the ecology of Ruapehu 7 We believe in high-quality research that has impact, and have world-class researchers and research strengths across science

Life at AUT

AUT is a modern and innovative university with endless opportunities and a supportive culture that celebrates diversity. Studying at AUT is your chance to meet new people and develop lifelong skills, while getting the support you need to succeed at university and beyond.

We're proactive in enabling all students to succeed, and our comprehensive student support services ensure that you have an amazing experience inside and outside the classroom.

We're here to help

No matter what the problem, our Student Hub advisors are here to help. You can find a Student Hub on each campus and our specialist staff can help with anything from enrolment and student ID cards to academic and personal support, fees and financial support, and services for our diverse student communities including the international, disability and rainbow community.

Dedicated support for new students

From Orientation to our many academic and cultural support programmes, our Student Services team is there to make starting out as a new student as easy as possible.

Supporting you into your future career

The AUT Employability and Careers team prepares you for your future career by developing job search, interview and networking skills, building your personal brand and more.

Connections to the workplace

We run a full programme of employer presentations, events and workshops throughout the year – on campus and online – with employers offering insights into their industries and recruiting future employees. Four graduate job boards, including an international one, offer great work opportunities for AUT graduates and interns.

Gain an edge on the competition

The AUT Edge and Beyond AUT Awards help you gain an extra edge in the competitive marketplace by developing highly employable skills through volunteering, leadership and employability activities.

International study opportunities

An international student exchange offers an amazing opportunity to study overseas as part of your degree. Study for a semester or a year at one of our partner universities around the world, immerse yourself in another culture, make lifelong friends and get international experience before you graduate.

Helping you succeed in your studies

Our library and learning support team offers a wide range of services and resources designed to help develop your academic skills.
The Library also runs a range of workshops to help you get the most out of your studies, and our peer mentoring programme provides academic support from others who have already completed the same course.

Top internships around the world

A good internship can be the foundation of a great career. That's why AUT Internz places students and graduates with top companies in New Zealand, North America, Asia and the UK – including Paramount Recording Studios, the Sundance Institute and Westpac Institutional Bank in New York.

A launchpad for entrepreneurs

Every entrepreneur starts somewhere.
At AUT, the best place for aspiring entrepreneurs is CO.STARTERS@AUT. This ten-week programme helps you turn your entrepreneurial ideas into a viable business.

An outstanding learning environment

At AUT you study in an innovative and interactive environment that embraces creativity, collaboration, and the sharing of ideas and culture. A number of our buildings have won prestigious architecture awards, and we're constantly improving our built environment to offer students the best possible learning experience.

Free access to digital tools and resources

We offer students all the digital tools needed to succeed, including free wifi on campus, the full Office 365 suite for up to five devices and free access to LinkedIn Learning, a world-leading online learning platform.

Getting involved in campus life

Joining a club is a great way to meet like-minded people and make lifelong friends outside of lectures. Choose from a range of student-run social, sustainability, academic and cultural clubs – a great way to meet new people, participate in events and get involved in campus life.

Play sport or join the gym

AUT is New Zealand's leading sports university, with state-of-the-art sports facilities, on-campus gyms, and a huge number of sports teams and events. As an AUT student you can participate in a wide variety of sports, from social on-campus games to elite international competitions.

Holistic approach to wellness

AUT offers comprehensive medical, and counselling and mental health services. We also run Bright Side events where students can develop better self-knowledge and a greater sense of purpose and meaning in their lives.

Disability student support and resources

Our Disability Support team is committed to helping you participate as fully as you can in learning and student life. We work with students before they start at AUT to help identify their specific needs and ensure they're set up for success.

Getting around

Whether it's finding your way to campus or getting around between lectures, AUT offers a range of resources to help you navigate your new environment, including shuttle buses that travel between campuses and interactive online maps.

Safe and friendly campuses

We make sure our students are safe when they're on campus. Our friendly security staff are available day and night to help if you have any concerns.

Bachelor of Science Overview [BSc | AK1041]

QUICK FACTS

Level:	7
Points:	360
Duration:	3 years F/T, 6 years P/T[1]
Campus:	City
Starts:	28 Feb & 18 July 2022

Antony Vavia
Doctor of Philosophy candidate
Bachelor of Science (Honours)
Bachelor of Science in Marine Biology

"Deciding to study marine biology was easy. I wanted a career that involved a bit of exploration here and there, discovering new things and potentially helping to solve something, so my dad suggested becoming a marine biologist. I would recommend AUT's science programme because you get to know your peers, but also your lecturers as they take a keen interest in your learning and progress. I'm now enrolled in a PhD, exploring how to ensure long-term sustainability of coral reef fisheries in the Cook Islands by doing a case study on the island of Mitiaro. The focus of this research is on the ecological integrity of coral reef ecosystems which are intrinsically linked to the nutritional and cultural wellbeing of Pacific Islanders surrounding ocean-dependence, and ecological and cultural sustenance in the Pacific."

Studying a Bachelor of Science is guaranteed to ignite your passion for knowledge about the world, and will be the start of a lifelong career in science. Study with us and you have access to some of the best lecturers in New Zealand, and state-of-the-art equipment. You'll have lots of opportunities to apply your knowledge in the lab or on field trips that span forests, mountains, and marine and freshwater environments. Our strong links with the scientific community extend right across the world – making it easy for you to transition from university to your career.

Entry requirements

Minimum entry requirements

University Entrance or equivalent

English language requirements

IELTS (Academic) 6.0 overall with all bands 5.5 or higher; or equivalent.

Useful New Zealand school subjects

- **Analytics, Applied Mathematics, Astronomy and Space Science, Computer Science:** Calculus, Mathematics, Physics, Statistics
- **Applied Conservation, Environmental Sciences, Marine Biology majors:** Biology and other science subjects
- **Biomedical Science, Food Safety, Microbiology, Molecular Genetics majors:** Biology, Level 3 Chemistry and other science subjects
- **Chemistry, Food Science majors:** Level 3 Chemistry, Mathematics and other science subjects
- **Geoscience, Geospatial Science, Health Protection, Psychology majors:** Science subjects

Don't meet the entry requirements?

Consider starting with our Certificate in Applied Science.

Majors

- Analytics
- Applied Conservation
- Applied Mathematics
- Astronomy and Space Science
- Biomedical Science
- Chemistry
- Computer Science
- Environmental Sciences
- Food Safety
- Food Science
- Geoscience
- Geospatial Science
- Health Protection
- Marine Biology
- Microbiology
- Molecular Genetics
- Psychology

You can also select any two of these majors (called a double major), or complete the Bachelor of Science without a major (standard pathway). Double majors may take longer to complete.

What this qualification covers

Year 1

There are core courses all students take this year, as well as courses related to your chosen major(s).

Year 2 & 3

In Year 2, you start to specialise in your major and can choose elective courses that help you develop a deeper understanding of your major. In Year 3, you can enrol in the Research Project course if you have a B grade average in 60 points at level 6. This may involve working alongside an organisation related to your major or undertaking a mini research project relevant to the needs of employers. The Research Project is also good preparation for postgraduate study. As in Year 2, there are compulsory courses for the major(s) plus a range of elective courses you can select.

Double your career options – study science and:

- Bachelor of Business (conjoint)

Today, standing out from the crowd is more important than ever. Conjoint programmes double your knowledge and opportunities, but don't take double the time to complete. You study two degrees at the same time in a single programme of study. It's usually possible to complete two three-year degrees in four to five years. You need to maintain a B grade average across all courses and do courses from each degree every year.

Scholarships

We offer competitive scholarships for the first year of the Bachelor of Science, one for every major. AUT also offers a number of other scholarships, including the Vice-Chancellor's Scholarship, which many of our science students have received. For more information visit **aut.ac.nz/scholarships**

AUT encourages early application. Places are limited[2].

1. You can change from full-time to part-time at any point in your study.
2. We encourage you to apply as soon as applications are open. Places are limited, and in many programmes there are more applications than available places. Once we have received your application, we may ask you to provide further information. Your application can only be assessed when you have provided all of the information requested.

For more details visit **aut.ac.nz/sciences**

Study science majors not available anywhere else in NZ

Lee Rabbidge
Laboratory Technician, Muller, Exeter, UK
Master of Science (Research)
Bachelor of Science in Microbiology

"I decided at the age of 25 that I wanted to change careers. I had always been interested in the sciences and was inspired by friends working in scientific fields. Microbiology and genetics had always interested me and AUT offered a degree that covered both - which intrigued me. After further investigation into the university, and hearing friends comment on the interactive learning at AUT, I decided to take the plunge. AUT's science programmes focus on teaching contemporary and next-generation knowledge. The inclusive, social and exciting environment at AUT also helps with achieving your academic goals. The friends I made along the way were definitely one of the highlights. Sharing the struggle of exams or helping to get that assignment in on time was stressful at the time, but looking back it truly was the best of times."

Course planner – Bachelor of Science

The Bachelor of Science is 360 points. If you study full-time you usually complete eight 15-point courses a year (a total of 120 points). You need at least 150 points at levels 6 and 7, with at least 75 points at level 7. There is also a Bachelor of Science with no major (standard pathway) available.

MAJORS	LEVEL 5 (Year 1)	LEVEL 6 (Year 2 & 3)	LEVEL 7 (Year 2 & 3)
Compulsory courses[1] for the following majors • Analytics • Applied Mathematics • Astronomy and Space Science • Computer Science	Mahitahi/Collaborative Practices FIVE OF: • Introductory Astronomy • Programming for Engineering Applications • Object Oriented Applications • Mathematical Concepts • Differential and Integral Calculus • Algebra & Discrete Mathematics • Physics I • Applied Statistics PLUS 2 electives		
Analytics		Probability Statistical Methods ONE OF: • Logical Database Design • Forecasting PLUS 5 electives	Applied Stochastic Models Industrial & Business Analytics ONE OF: • Data Mining & Knowledge Engineering • Statistical Computing with SAS PLUS 3 electives
Applied Mathematics		Multivariate Calculus Differential Equations ONE OF: • Linear Algebra • Financial Mathematics PLUS 5 electives	Numerical Analysis Linear Partial Differential Equations ONE OF: • Financial Modelling & Computation • Applied Stochastic Models PLUS 3 electives
Astronomy and Space Science		Space, Time & Gravity Astrophysics and Space Science Physics II PLUS 5 electives	Practical Astrophysics Radio Astronomy Frontiers of Astronomy & Space Science PLUS 3 electives
Computer Science		Data Structures and Algorithms Algorithm Design and Analysis ONE OF: • Operating Systems • Logic and Discrete Structures PLUS 5 electives	Theory of Computation Programming Languages ONE OF: • Distributed and Mobile Systems • Artificial Intelligence PLUS 3 electives
MAJORS	**LEVEL 5 (Year 1)**	**LEVEL 6 (Year 2 & 3)**	**LEVEL 7 (Year 2 & 3)**
Compulsory courses:[1] Applied Conservation, Biomedical Science, Chemistry, Environmental Science, Food Safety, Food Science, Geoscience, Geospatial Science, Health Protection, Marine Biology, Microbiology, Molecular Genetics, Psychology.	Knowledge, Enquiry & Communication		
Applied Conservation	Plants & Animals Ecology & Evolution Biological Sampling & Interpretation Health & Environment OR Hauora Māori Biodiversity AT LEAST TWO OF: • Microbiology • Biological & Solution Chemistry • Human Geography • Our Dynamic Earth	Biology of Marine Organisms Geographic Information Systems Biogeography Conservation Planning Environmental Law AT LEAST TWO OF: • Freshwater Ecology • Terrestrial Ecology • Ecological Concepts I • Ecological Concepts II • Plant and Animal Taxonomy PLUS 1 elective	Applied Conservation Ecological Management & Modelling Animal Behaviour & Modelling PLUS 5 electives OR 3 electives & Research Project
Biomedical Science	Principles of Chemistry Biological & Solution Chemistry Microbiology Biological Sampling & Interpretation Human Anatomy and Physiology I Health & Environment OR Hauora Māori PLUS 2 electives from this list[2]	Analytical Chemistry Human Anatomy & Physiology II Methods of Research & Enquiry Genes, Cells & Molecules Biochemistry PLUS 3 electives	Pharmacology for Professional Practice Natural Compounds Biomedical Science Biomedical Technology PLUS 4 electives OR 2 electives & Research Project

Chemistry	Principles of Chemistry Biological & Solution Chemistry Biophysics ONE OF: • Health and Environment • Hauora Māori • Mathematical Concepts PLUS electives	FOUR OF: • Analytical Chemistry • Thermodynamics & Chemical Kinetics • Biochemistry • Organic Chemistry • Inorganic Chemistry PLUS 4 electives	THREE OF: • Quantum Mechanics & Spectroscopy • Advanced Inorganic Chemistry • Advanced Analytical Chemistry • Organic Synthesis & Molecular Design • Protein & Metabolic Chemistry PLUS 5 electives OR 3 electives & Research Project
Environmental Sciences	Plants & Animals Ecology & Evolution Health & Environment OR Hauora Māori Biological Sampling & Interpretation THREE OF: • Principles of Chemistry • Biological & Solution Chemistry • Biodiversity • Microbiology • Biophysics • Our Dynamic Earth • Human Geography	Ecological Concepts I Ecological Concepts II Environmental Law Environmental Risk Assessment Research Techniques PLUS 3 electives	Plant Ecology Environmental Chemistry Ecological Management & Modelling PLUS 5 electives OR 3 electives & Research Project
Food Safety	Principles of Chemistry Food Science Biological & Solution Chemistry Microbiology Health & Environment OR Hauora Māori Biological Sampling & Interpretation ONE OF: • Biophysics • Ecology & Evolution	Environmental Risk Assessment Analytical Chemistry Food Microbiology Communicable Diseases Research Techniques PLUS 3 electives	Food Design & Packaging OR Biotechnology Food Safety Systems Health Protection Advanced Food Microbiology PLUS 4 electives OR 2 electives & Research Project
Food Science	Principles of Chemistry Food Science Biological & Solution Chemistry Biophysics Microbiology Biological Sampling & Interpretation Health & Environment OR Hauora Māori	Analytical Chemistry Food Microbiology Food Process Engineering Food Technology Food Chemistry PLUS 3 electives	Advanced Food Microbiology Advanced Food Chemistry Sensory Evaluation PLUS 5 electives OR 3 electives & Food Product Development OR 3 electives & Research Project
Geoscience	Biological Sampling & Interpretation Introductory Astronomy Our Dynamic Earth Health & Environment OR Hauora Māori Ecology & Evolution PLUS AT LEAST TWO OF: • Principles of Chemistry • Biological & Solution Chemistry • Biophysics • Biodiversity • Microbiology • Plants & Animals	Geology, Landscape & Environment Environmental Risk Assessment Research Techniques Geographic Information Systems Sedimentary Rocks & Environments PLUS 3 electives	AT LEAST THREE OF: • Remote Sensing • Oceanography • Structural Geology & Tectonics • Earth Materials PLUS 5 electives OR 3 electives & Research Project
Geospatial Science	Plants & Animals OR Biodiversity Ecology & Evolution Biological Sampling & Interpretation Health & Environment OR Hauora Māori Our Dynamic Earth OR Human Geography PLUS AT LEAST TWO OF: • Principles of Chemistry • Biophysics • Microbiology • Biological & Solution Chemistry	Environmental Law Research Techniques Geographic Information Systems Biogeography Geology, Landscape & Environment PLUS 3 electives	Geospatial Analysis Remote Sensing Ecological Management & Modelling PLUS 5 electives OR 3 electives & Research Project

1. Or equivalent, depending on your chosen major. **2.** Plants & Animals, Ecology & Evolution, Biodiversity, Human Geography, Biophysics.

Course planner – Bachelor of Science continued

Health Protection	Principles of Chemistry	Environmental Risk Assessment	Food Safety Systems
	Plants & Animals	Food Microbiology	Advanced Food Microbiology
	Microbiology	Environmental Health	Health Protection
	Biological Sampling & Interpretation	Environmental Microbiology	PLUS 5 electives OR 3 electives & Research Project
	Health & Environment OR Hauora Māori	Geographic Information Systems	
	Epidemiology	Communicable Diseases	
	PLUS AT LEAST ONE FROM: • Biological & Solution Chemistry • Biodiversity • Ecology & Evolution • Biophysics • Food Science	PLUS 2 electives	
Marine Biology	60 POINTS FROM: • Plants & Animals • Ecology & Evolution • Principals of Chemistry • Health & Environment OR Hauora Māori • Biological Sampling & Interpretation	Biology of Marine Organisms	Estuarine Ecology
		Marine Invertebrates	Ecological Management & Modelling
		Research Techniques	Oceanography
		Environmental Law	PLUS 5 electives OR 3 electives & Research Project
		PLUS 4 electives	
	PLUS AT LEAST THREE OF: • Biodiversity • Microbiology • Our Dynamic Earth • Human Geography		
Microbiology	Microbiology	Environmental Microbiology	Advanced Food Microbiology
	Biological & Solution Chemistry	Food Microbiology	Biotechnology
	Ecology & Evolution	Biochemistry	Molecular Genetics
	Health & Environment OR Hauora Māori	Principals of Genetics	PLUS 5 electives OR 3 electives & Research Project
	Principles of Chemistry	Cells, Genes & Molecules	
	PLUS AT LEAST TWO OF: • Biological Sampling & Interpretation • Biophysics • Food Science • Biodiversity • Plants & Animals	Industrial Microbiology	
		PLUS 2 electives	
Molecular Genetics	Microbiology	Principles of Genetics	AT LEAST THREE OF: • Protein and Metabolic Chemistry • Molecular Genetics • Molecular Diagnostics • Computational Genetics • Microbial Genetics
	Biological & Solution Chemistry	Research Techniques	
	Biological Sampling & Interpretation	Biochemistry	
	Health & Environment OR Hauora Māori	Cells, Genes & Molecules	
	Principles of Chemistry	PLUS 4 electives	
	PLUS AT LEAST TWO OF: • Plants & Animals • Ecology & Evolution • Biodiversity • Our Dynamic Earth • Human Geography • Biophysics		PLUS 5 electives OR 3 electives & Research Project
Psychology	Biological Sampling & Interpretation	Research Techniques	AT LEAST THREE OF: • Emotions & Human Nature • Experimental & Applied Behaviour Analysis • Critical Evaluation in Psychology • Biopsychology • Positive Psychology • Applied Issues in Cultural & Social Psychology • Experimental & Applied Behaviour Analysis II • Health Psychology • Approaches to Psychological Intervention • Advanced Research Methods in Psychology
	Health & Environment or Hauora Māori	AND AT LEAST FOUR OF: • Individuals & Identities • Psychological Assessment • Brain & Behaviour • Cognitive Psychology • Abnormal Psychology • Social Psychology • Personality	
	Introduction to Psychology A (PSYCH501 or PSYC580)		
	Introduction to Psychology B	PLUS 3 electives	
	PLUS AT LEAST TWO OF: • Plants & Animals • Principles of Chemistry • Biological & Solution Chemistry • Ecology & Evolution • Biodiversity • Our Dynamic Earth • Human Geography • Human Anatomy & Physiology I		PLUS 5 electives OR 3 electives & Research Project

Bachelor of Science
Analytics

Analytical skills are essential in today's business environment. The ability to analyse data using appropriate statistical, mathematical and computational techniques is highly sought after in New Zealand and internationally. Career options include sales analysis, customer profile analysis, data analysis for research projects or analysis of financial trends.

The Analytics major focuses on business and industry. You gain key skills in sophisticated predictive modelling and quantitative and statistical analysis. Our close links with organisations like Statistics NZ give you relevant insights into current industry thinking and hands-on experience for your career.

What this major covers

Refer to page 12 for the courses you'll study each year.

Year 1

These courses help you develop a general scientific grounding for a career in analytics, and prepare you for more advanced courses in Year 2 and 3.

Year 2 & 3

You take advanced level courses related to analytics and can choose from a wide range of science electives to make up the 360 points required to complete your degree.

Workplace experience

In your final year you can enrol in the Research Project course (30 points) if you have at least a B grade average in 60 points at level 6. This may involve working on a project related to your major. Recent student projects included a study of the various factors behind house price movements in the NZ housing market.

Scholarships

Biostatistician, business/quality/statistical analyst, government statistician, industrial forecaster, logistics or quality analyst, medical statistician, secondary teacher[1].

1. After an additional year of teacher training.

Shannon Bassett
Treasury Analyst, Bancorp
Bachelor of Science in Analytics and Finance

"After completing a range of subjects in my first year, I found my interest in finance. Financial instruments like loans, investments and stocks are all key to a successful business and help shape our economy. Finance influences our daily lives and what better way to analyse our financial market than with analytics.

"My highlight at AUT was making new friends. I made so many friends during my time at AUT; some were completing the same degree as I was and some studied completely different fields, but I keep in touch with all of them after university. You'd be surprised how much you can learn just from talking to different people.

"University is about so much more than just gaining a degree and AUT provides many opportunities for each individual to thrive. AUT has various groups, events and career opportunities – including the Investment Club, career fairs and so many more – that enable you to network with business leaders, meet like-minded people, make friends and keep in touch with your industry.

"I'm now working as a treasury analyst at investment banking group Bancorp. It's a challenging role as COVID-19 has brought a lot of uncertainty and volatility in the market, so it's a very exciting time to be working in finance."

Ella Walmsley
Programme Coordinator, Whitebait Connection
Bachelor of Science in Environmental Sciences and Applied Conservation

"I had been interested in environmental education for a while now, and in this role I work with communities around streams in Auckland. This can involve working with a local school, going into the classroom, facilitating field trips and supporting action projects. I also work with community groups to educate locals.

"The variety of working with children, community groups and experts always keeps my role interesting and means I'm constantly learning and improving. I love getting to work with so many inspiring people. I also have the freedom to make my work my own by creating new activities.

"I wanted to study something that would increase my knowledge of our environment and give me the tools to improve it. I had heard that AUT was more practical, and that's an effective learning method for me. I also chose AUT because none of my friends were going to this university, and it would force me out of my comfort zone. I felt confident in doing this at AUT because it has a reputation for being friendly.

"The field trips that are part of the Bachelor of Science are what I enjoyed the most about my time at AUT. Going to the Central North Island including Pureora forest, to the Hunuas and to the Solomon Islands were all standout learning experiences and overall highlights."

Bachelor of Science
Applied Conservation

Want to help protect plants, animals and our natural environment? People who can advocate for change and improve the effectiveness of conservation initiatives are in demand in New Zealand and around the world. The Applied Conservation major addresses this need and was developed in partnership with the Department of Conservation.

You develop a mix of biological science and social science skills – a combination that is sought after by conservation employers like the Department of Conservation, council organisations and national and international NGOs. You'll graduate with the skills to work with communities and stakeholders to plan, manage and implement vital conservation projects.

What this major covers

Refer to page 12 for the courses you'll study each year.

Year 1

This year's courses help you develop a general scientific grounding for a career in conservation, and prepare you for more advanced courses in Year 2 and 3.

Year 2 & 3

You take advanced level courses related to applied conservation and can choose from a wide range of science electives to make up the 360 points required to complete your degree.

Workplace experience

In your final year you can enrol in the Research Project course (30 points) if you have at least a B grade average in 60 points at level 6. This may involve working on a project related to your major. Institutes and employer organisations involved include Auckland Council, Department of Conservation, NIWA, SCION (Rotorua).

Career opportunities

Environmental consultant, science teacher[1], conservation scientist for Department of Conservation, regional or city councils or Non-Government Organisations (NGOs) including Conservation International or WWF.

1. After completing a graduate diploma in education.

Bachelor of Science
Applied Mathematics

Applied mathematics tells us about our world and helps predict what will happen next. Whether you want to look at global warming patterns, figure out the structural integrity of a building or forecast economic trends – it all relies on applied mathematics.

This major will give you the skills to carry out modelling research and the analysis of problems in the fields of engineering, science and business.

What this major covers

Refer to page 12 for the courses you'll study each year.

Year 1

These courses help you develop a general scientific grounding for a career in applied mathematics, and prepare you for more advanced courses in Year 2 and 3.

Year 2 & 3

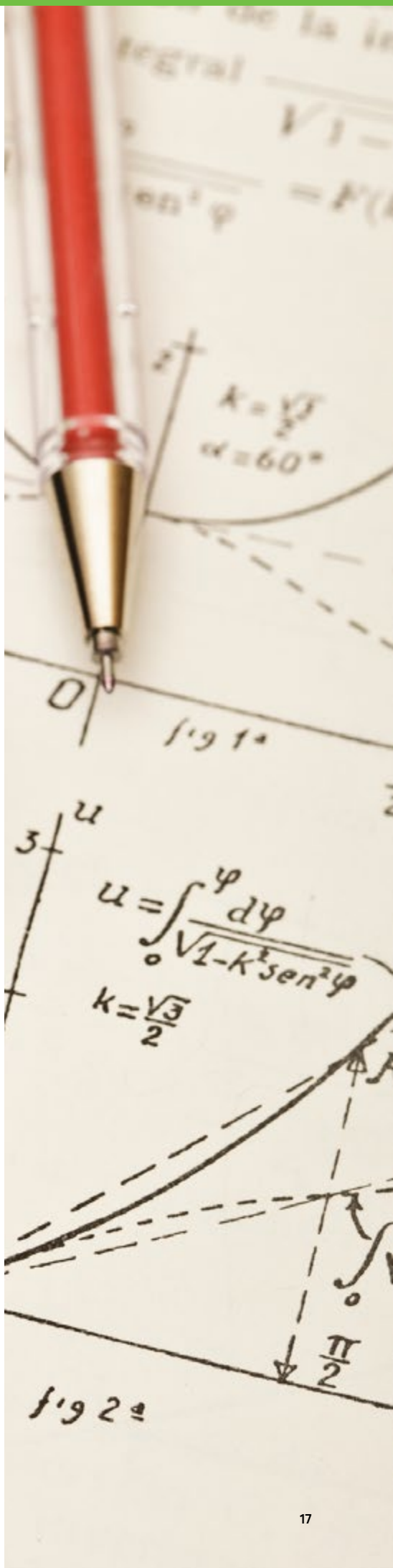
You take advanced level courses related to applied mathematics and can choose from a wide range of science electives to make up the 360 points required to complete your degree.

Workplace experience

In your final year you can enrol in the Research Project course (30 points) if you have at least a B grade average in 60 points at level 6. This may involve working on a project related to your major. Recent student projects included modelling linear waves in shallow waters, and modelling sound waves around a physical boundary.

Career opportunities

Actuary, control buyer or purchasing agent, industrial engineering scientist, market and financial analyst, mathematician, research analyst and associate, secondary teacher[1].



1. After an additional year of teacher training.

Freya Fortzer
Compliance Monitoring Officer, Auckland Council
Bachelor of Science in Astronomy and Environmental Sciences

"A visit to the Stardome Observatory ignited my passion for science and encouraged me to enrol in a Bachelor of Science at AUT. I was working at an office job, and one night I went to a show at the Stardome Observatory. It blew my mind! I went home with the 'there must be more to life' feeling that I couldn't shake. I ended up leaving my job, and decided to go back to university to study something I was interested in and passionate about – science.

"I was impressed by the calibre of the academic staff. I loved that AUT has lecturers who are accomplished scientists, actively working in the field. They had this encyclopaedic knowledge about the subjects they wanted to share with us, rather than just teaching us how to pass exams.

"One of the astronomy lecturers, for example, did research at the Stardome Observatory. One night he invited the class there to show us a few things and take a look through the Zeiss telescope. It was the first time I'd seen celestial objects in such clarity, and it was probably one of the most beautiful things I've ever seen."

*The Astronomy major is now called Astronomy and Space Science.

Bachelor of Science
Astronomy and Space Science

Turn your fascination for space into a career. AUT's Warkworth Observatory is linked to New Zealand's most powerful super computers and has the only radio telescopes in the country. That's why AUT's Institute for Radio Astronomy and Space Research (IRASR) can process enormous amounts of data from deep space, used for cutting-edge research in astrophysics and earth science.

The Astronomy and Space Science major covers the latest developments in astronomy and space science, spherical astronomy, celestial mechanics, theoretical astrophysics and mathematical physics. You could work with IRASR during your study.

What this major covers

Refer to page 12 for the courses you'll study each year.

Year 1

These courses help you develop a general scientific grounding for a career in astronomy and space science, and prepare you for more advanced courses in Year 2 and 3.

Year 2 & 3

You take advanced level courses related to astronomy and space science, and can choose from a wide range of science electives to make up the 360 points required to complete your degree.

Workplace experience

In your final year you can enrol in the Research Project course (30 points) if you have at least a B grade average in 60 points at level 6. This may involve working on a project related to your major. Recent student projects included the creation of a catalogue of Southern Hemisphere radio sources using the AUT 30-metre radio telescope.

Career opportunities

Astronomer, industrial mathematician, observatory technician or research officer, planetarium lecturer, programmer or systems developer, technical software developer, scientific programmer, secondary teacher [1].

1. After an additional year of teacher training

Bachelor of Science
Biomedical Science

Biomedical science and biotechnology have revolutionised research over the past decade, stimulating growth in industries like agriculture, pharmaceuticals, veterinary science and medical research. Biomedical science is the most rapidly developing area in biological sciences, and demand for biomedical graduates is expected to grow.

If you're interested in emerging areas of medical and health science and how they can improve human and animal health, the Biomedical Science major could be right for you. You gain an understanding of fundamental physiology and biomedical research, working with the latest laboratory techniques and equipment. AUT has specialist biomedical labs with analytical equipment not available at any other New Zealand university.

What this major covers

Refer to page 12 for the courses you'll study each year.

Year 1

This year's courses give you a scientific foundation in chemistry, biology and human physiology, and prepare you for more advanced courses in Year 2 and 3.

Year 2 & 3

You take advanced level courses related to biomedical science and can choose from a wide range of science electives to make up the 360 points required to complete your degree.

Workplace experience

In your final year you can enrol in the Research Project course (30 points) if you have at least a B grade average in 60 points at level 6. This may involve working on an industry-related project related to your major.

Career opportunities

Research scientist in Crown Research Institutes, private research institutes and universities around the world; pharmaceutical and biotechnology companies, health product and food-for-health product companies, government organisations.

Mogana (Morgan) Kumaar Manivannan
Malaysia
Marine Science and Feed Technician, The New Zealand Abalone Company (TNZAC), Bluff
Bachelor of Science in Biomedical Science

"The application of biomedical science and technology helps individuals understand how scientific phenomena occur in all living organisms. Ultimately, using biomedical science and technology to improve diagnostics and improve current therapeutics known to mankind will make the world a better place to live in.

"My main highlight of my time at AUT would be sampling abalones (Paua) at the MOANA Aquaculture farm in Ruakaka. This study exposed me to the bigger picture of industrial scale Paua breeding and farming, which is quite a rare opportunity not many people get to experience.

"I also enjoyed working as a research assistant during the summer break, working on several different projects, from aquaculture feed technology to cattle skin toxicity testing using different formulations. This experience provided me with knowledge across multiple modern biomedical technologies.

"I now work at The New Zealand Abalone Company (TNZAC), based in Bluff, working on different types of feed formulations for abalone (Paua). This includes ingredient alterations and ratio alterations to come up with the best applicable 'recipe' depending on the various growth stages of the animals. I'm also monitoring and studying the growth and overall health of the different species nurtured."

Shaun D'souza
Sri Lanka
2nd-year student,
Bachelor of Science in Chemistry

"At an AUT science lecture you don't just learn the theory. Our lecturers also introduce and discuss a lot of real-life applications of chemistry during the lectures. It has been fascinating to understand how the science we learn is put to use in the industry.

"I was always uncertain about which area of chemistry I was most interested in but when my lecturer introduced me to the many exciting areas of research within organic chemistry, it sparked my hidden interest and helped me structure my future accordingly. My dream career would be to work as an organic chemist where I can research reaction mechanisms and synthesize different molecules.

"I'd like to encourage all students who are passionate about chemistry and science in general to come and study at AUT. The theoretical knowledge, practical experience, and research opportunities here at AUT will you give the perfect foundation to start a rewarding career in science.

"I loved that I got the opportunity to pick and learn from a bunch of exciting electives like food science and microbiology. These ended up giving me the much-needed interdisciplinary knowledge and skills that could be a game-changer for me in the future."

Bachelor of Science
Chemistry

Developing new products and processes, and experimenting with the make-up and behaviour of different chemicals are some of the challenges chemistry graduates get to take on. A degree in chemistry opens the door to a wide range of career options, both in and out of the laboratory. Study with us and you're exposed to a wide range of areas in chemistry including environmental, biological, organic, physical, inorganic, food and analytical chemistry. You gain essential practical laboratory skills needed to be successful in scientific employment – here and overseas.

Chemistry graduates are often employed in the chemical and related industries, including pharmaceuticals, agrochemicals, petrochemicals, toiletries, plastics and polymers. There are also opportunities in the food and drink industry, health and medical organisations, and scientific research organisations and agencies.

What this major covers

Refer to page 13 for the courses you'll study each year.

Year 1

This year's courses give you a general scientific grounding and prepare you for more advanced courses in Year 2 and 3.

Year 2 & 3

You take advanced level courses related to chemistry and can choose from a wide range of science electives to make up the 360 points required to complete your degree.

Workplace experience

In your final year you can enrol in the Research Project course (30 points) if you have at least a B grade average in 60 points at level 6. This will involve two semesters of work in the chemistry postgraduate laboratory where you carry out research into making new compounds, developing new methods to analyse compounds, determining the chemical reactivity of compounds or studying how chemical reactions occur.

Career opportunities

Chemist; analytical, environmental, paint or research chemist; pollution control consultant, research scientist; local councils: environmental, public health, and waste management and monitoring services, science teacher[1].

1. After completing a graduate diploma in education.

Bachelor of Science
Computer Science

The rapid evolution of technology makes computer science an exciting and demanding career option – one with huge job opportunities in New Zealand and around the world. In the Computer Science major you learn effective ways to solve computing problems and devise new ways to use computing technologies. You explore advanced aspects of technical software, including how to devise computing algorithms for new technologies, and how to develop multi-tasking systems and 3D user interfaces.

What this major covers

Refer to page 12 for the courses you'll study each year.

Year 1

These courses help you develop a general scientific grounding for a career in computer science, and prepare you for more advanced papers in Year 2 and 3.

Year 2 & 3

You take advanced level courses related to computer science, and can choose from a wide range of science electives to make up the 360 points required to complete your degree.

Workplace experience

In your final year you can enrol in the Research Project course (30 points) if you have at least a B grade average in 60 points at level 6. This may involve working on a project related to your major. Recent student projects included a game theoretical approach to how people behave when confronted with stalking.

Career opportunities

Computer game and 3D graphics programmer, cryptographer, mobile computer systems developer, security analyst, software developer, systems analyst or designer, systems architect or designer, technical software developer.

Dannie Cullen
Graduate Environmental Scientist, AECOM
Bachelor of Science (Honours)
Bachelor of Science in Marine Biology and Environmental Sciences

"I became a junior open water diver when I was ten, and my intended career path has always been connected to the environment in some way. A degree in marine biology felt like a natural choice for me. I was attracted to AUT's Bachelor of Science as it offered me an opportunity to do a double major. The opportunity to study both marine biology and environmental sciences was a no-brainer for me.

"Throughout my time at AUT, I was offered a number of different learning experiences including fish and aquatic plant identification while snorkelling at the Goat Island Marine Reserve, terrestrial vegetation identification in the Pureora Forest Park, improving my technical skills in the laboratory and learning to conduct a scientific study, collect and analyse data and report effectively.

"Having a wide range of different experiences at AUT gave me the ability to adapt to different challenges; something that has been extremely useful in my career now.

"I love being able to work both outdoors and in the office. I really enjoyed doing fieldwork for my Bachelor of Science (Honours) dissertation at AUT, and this is no different in the workplace. I'm often working out in the field, conducting groundwater investigations and environmental soil sampling. I also spend time processing data and reporting."

Bachelor of Science
Environmental Sciences

New Zealand's spectacular natural environment is the envy of the world. Throughout the Environmental Sciences major you can immerse yourself in this environment through the field trips that are an essential part of this major.

By studying environmental sciences you explore how species interact with each other and with their physical environment. You also explore the ecological principles of freshwater and terrestrial ecosystems, animal behaviour and ecology, and plant ecology. This understanding is essential to protect New Zealand's unique natural environment, and is an essential foundation for many rewarding environmental sciences careers.

What this major covers

Refer to page 13 for the courses you'll study each year.

Year 1

This year's courses give you a general scientific grounding and prepare you for more advanced courses in Year 2 and 3.

Year 2 & 3

You take advanced level courses related to environmental sciences and can choose from a wide range of science electives to make up the 360 points required to complete your degree.

Workplace experience

In your final year you can enrol in the Research Project course (30 points) if you have at least a B grade average in 60 points at level 6. This may involve working on an industry-related project related to your major. Companies or research organisations involved include Auckland Council, Department of Conservation, SCION (Rotorua).

Career opportunities

Conservation organisations like the Department of Conservation, environmental consultant, government research and monitoring agencies; local councils: Environmental, public health, and waste management and monitoring services; science teacher[1], scientific laboratory analyst.

1. After completing a graduate diploma in education.

Bachelor of Science
Food Safety

Food and beverage exports are critical to New Zealand's economy but overseas markets want to make sure that these products are safe and of high quality. New Zealand organisations need to meet the necessary food safety standards to avoid being blocked from important markets. An understanding of food safety is also essential to minimise the economic impact of crop damage and food spoilage.

This major addresses this need for food safety graduates. You gain important practical skills in food microbiology, instrumental food analysis and food chemistry. These skills are highly transferable, and can lead to exciting careers around the world.

What this major covers

Refer to page 13 for the courses you'll study each year.

Year 1

This year's courses give you a general scientific grounding and prepare you for more advanced courses in Year 2 and 3.

Year 2 & 3

You take advanced level courses related to food safety and can choose from a wide range of science electives to make up the 360 points required to complete your degree.

Workplace experience

In your final year you can enrol in the Research Project course (30 points) if you have at least a B grade average in 60 points at level 6. This may involve working on an industry-related project related to your major. Companies or research organisations involved include AWS Group, Food Safe Ltd.

Career opportunities

Food safety inspector, food microbiologist, food service executive, risk communication specialist, food safety programme executive, quality assurance officer, quality control executive.

Saipriya Shahi
Quality Assurance Specialist, Tasti
Bachelor of Science in Food Science

"I love that I can use my understanding of food science to make a difference. Tasti has multiple departments offering different product lines, including fruit cereal bars, nut bars, baking ingredients, cereals, oil and a new gluten free facility. Some of the product lines have been in market since the 1930s.

"My role focuses on quality improvement of both the systems and processes at Tasti. Apart from regular line and product inspections, sensory testing and working alongside the new product development team, I also work on numerous projects leading to improvement of our products, as well as regularly training operators or team members, and performing internal audits.

"I just loved the overall experience of studying at AUT. The academic staff were extremely supportive. They genuinely wanted their students to not only learn but to do the best they possibly could.

"At AUT, I had the opportunity to be part of many different events, which truly encouraged me to step out of my comfort zone. But the best part about studying at AUT has to be the practical experience you gain as part of your degree. It really prepares you to step out into the real world straight after graduation, and it also helps you recognise how well you've understood the content."

Tung Thanh Diep
Vietnam
Doctor of Philosophy candidate

"For my PhD in food science, I'm investigating how adding tamarillo can increase the nutritional value of yoghurt. Tamarillo is highly nutritious, with bioactive compounds that can improve wellbeing, however in New Zealand tamarillo has mostly been consumed as a fresh fruit. Little research has been done to develop tamarillo-derived foods and the potential of tamarillo extract as a functional ingredient remains largely unexplored.

"My research will provide more information on tamarillo for the export market, food companies, and health and nutrition experts. It will also explore the advantages of developing food products using ingredients derived from this fruit to enhance the product's nutritional value, and to make consumption of tamarillo easier.

"What attracted me to AUT for my studies is that it has been recognised around the world for its high-quality education and as one of the world's best modern universities. AUT also has high-quality amenities and research facilities for students, as well as a lot of expertise in helping international students succeed in their programmes.

"AUT offers the perfect environment for my studies. I enjoy the diversity of the people here and the friendly environment. The academic staff and technicians at AUT have immense knowledge in their fields, especially my supervisors."

Bachelor of Science
Food Science

Food innovation is driven by trends like reducing sugar, sodium and fat; using more natural flavourings and colourings, and improving the shelf-life of foods. Food scientists are critical in the production of food. Food science opens the door to a range of careers – developing new food products, improving sensory attributes and nutritional content of foods, and finding new ways to preserve, process, package and distribute food.

The Food Science major introduces you to the science behind the food we eat. You learn food chemistry, food microbiology, sensory science, food product development and food processing and technology. It covers the science and practical skills involved in the conceptualisation, production, preservation, safety and quality evaluation of foods. You learn to analyse the characteristics of food, discover new food sources, and research how to make processed foods safe and healthy.

What this major covers

Refer to page 13 for the courses you'll study each year.

Year 1

This year's courses give you a general scientific grounding and prepare you for more advanced courses in Year 2 and 3.

Year 2 & 3

You take advanced level courses related to food science and can choose from a wide range of science electives to make up the 360 points required to complete your degree.

Workplace experience

In your final year you can enrol in either the Food Product Development or the Research Project course if you have at least a B grade average in 60 points at level 6. This may involve working on an industry-related project related to your major. Companies or research organisations involved include AgResearch, Future Cuisine Ltd, Goodman Fielder, McCowley Enterprises Ltd, Merit Meats Ltd, Olivado NZ, Tegel, Thoughtgroup Ltd.

Career opportunities

Product development technologist, food microbiologist, sensory scientist, food chemist, food scientist.

Bachelor of Science
Geoscience

Want to understand how our Earth works as a whole planet? Study the Geoscience major in the Bachelor of Science and learn more about our planet and your world. Explore how Earth compares to other planets, why we experience earthquakes, where the new resources of tomorrow will come from, and how you fit into 4.6 billion years of time.

Our Geoscience major emphasises aspects of geology, including geo-hazards and risk, geological applications to the environment, geological field skills, and rocks, minerals and the processes that produce earth materials.

What this major covers

Refer to page 13 for the courses you'll study each year.

Year 1

This year's courses give you a general scientific grounding and prepare you for more advanced courses in Year 2 and 3.

Year 2 & 3

You take advanced level courses related to geoscience and can choose from a wide range of science electives to make up the 360 points required to complete your degree.

Workplace experience

In your final year you can enrol in the Research Project course (30 points) if you have at least a B grade average in 60 points at level 6. This may involve working on an industry-related project related to your major.

Institutes and employer organisations involved include GNS, disaster and risk agencies, WaterAid; private consultancies for environment, construction, infrastructure and resources; and Auckland Council.

Career opportunities

Geoscience can open doors in a range of careers including resource companies, government, national and international development, pollution and waste, environmental consultancies, museums and national parks. Careers can include geological scientist, research scientist or science teacher[1].

1. After completing a graduate diploma in education.

Hinengarangi Makoare
Niuean, Ngāti Whātua, Te Rarawa
Kaitiaki Technical Support,
Ngāti Whātua Ōrākei Whai Maia Limited
Bachelor of Science in Applied Conservation and Geospatial Science

"Coming from Niuean and Māori backgrounds, I grew up with an understanding of the environment and its importance, value and sacredness. In high school I began to understand the importance of people, connection and your whakapapa; where you come from. It was then that I decided I wanted a job that incorporated this with work in the environment.

"I decided to study at AUT because the environmental sciences courses aligned with the path I wanted to take towards my career choice. My dream was to work alongside my people to further protect and preserve our land, sea, resources and traditions, either here in Aotearoa or in the Pacific.

"One of the courses I particularly enjoyed was the geoscience course Geology, Landscape and Environment, taught by Professor Michael Petterson. What I enjoyed most was that this course made you forget you're in a classroom. The assessments didn't feel like work to meet a deadline but were more about deepening your understanding of the world, which is what education should feel like.

"I believe a good teacher provides the information and resources but allows you to think critically and decide where to build from there. The staff that I've encountered at AUT do just that."

Milimo Muleya
Zambia
Senior Biologist, Ministry of Fisheries and Livestock, Lusaka, Zambia
Master of Science (Research) with First Class Honours

"I researched how photogrammetry can be used for conducting a risk assessment of a landfill site. My research was motivated by looking around at the various amounts of waste we produce and send to landfill sites. In Zambia, solid waste management is a problem for many communities and that inspired my research. My research will help communities and industry understand the risks associated with unregulated disposal sites and highlight the need for sustainable waste management practices.

"AUT has afforded me the opportunity to learn from highly experienced and knowledgeable educators and friendly staff. I've been able to study how to apply technology to science, especially in environmental science. Throughout my time at AUT, I was able to meet and interact with a diverse group of people from all over the world, and got to network and share experiences and ideas.

"Science and technology have always combined to create better scientists and AUT combines both to produce the best in the field. AUT offers a wide range of programmes for students with varying interests, and has the expertise and facilities to ensure students have a full understanding of what they choose to study."

Bachelor of Science
Geospatial Science

The work of a geospatial scientist shapes the spaces we live in. Geospatial scientists help determine where schools, hospitals and new housing areas are located, and how to make the most efficient use of available resources. Geospatial scientists also identify which areas need environmental protection. Geospatial science at AUT emphasises its use for conservation planning. Graduates with geospatial science skills are sought after by a range of employers, and demand will continue to grow, spurred on by population growth and finite resources.

In the Geospatial Science major you learn to interpret, analyse, present, and distribute information about locations in space and time. You explore an awareness of environmental considerations, and develop geospatial plans for environmental management and resource planning.

What this major covers

Refer to page 13 for the courses you'll study each year.

Year 1

This year's courses give you a general scientific grounding and prepare you for more advanced courses in Year 2 and 3.

Year 2 & 3

You take advanced level courses related to geospatial science and can choose from a wide range of science electives to make up the 360 points required to complete your degree.

Workplace experience

In your final year you can enrol in the Research Project course (30 points) if you have at least a B grade average in 60 points at level 6. This may involve working on an industry-related project related to your major.

Career opportunities

Environmental planner, GIS analyst or consultant, natural resource or hazard manager, sustainable development planner, geography teacher[1], geospatial scientist for Crown-owned Research Institutes, government departments and local government.

1. After completing a graduate diploma in education.

Bachelor of Science
Health Protection

Interested in protecting people and communities from pollution, unsafe food, infectious diseases and poor living conditions? Health protection is a growing industry and health protection and environmental health officers are in high demand throughout New Zealand – our students often secure employment before they graduate. This major is a great stepping stone to a career as an environmental health officer or health protection officer[1].

The Health Protection major explores environmental health, pollution control, food safety, environmental and public health law, risk assessment, toxicology and communicable disease control. You'll be equipped to keep people safe in their homes, offices and natural environment.

What this major covers

Refer to page 14 for the courses you'll study each year.

Year 1

This year's courses give you a general scientific grounding and prepare you for more advanced courses in Year 2 and 3.

Year 2 & 3

You take advanced level courses related to health protection and can choose from a wide range of science electives to make up the 360 points required to complete your degree.

Workplace experience

In your final year you can enrol in the Research Project course (30 points) if you have at least a B grade average in 60 points at level 6. This may involve working on an industry-related project related to your major.

Career opportunities

Inspecting food premises, tattooists, hairdressers, beauty salons or camping grounds; noise control and environmental noise; ar quality, drinking water quality and beach water quality; communicable disease investigation, vector control, investigating public health nuisances, biosecurity [2], Ministry for Primary Industries [2].

1. Environmental health officers (EHOs) work for city or district councils while health protection officers (HPOs) work for district health boards.
2. After gaining experience there is the opportunity to work in biosecurity or the Ministry for Primary Industries.

Tanayaz Patil
Inshore Fisheries Analyst,
Fisheries New Zealand,
Ministry for Primary Industries
Bachelor of Science in Applied Conservation and Marine Biology

"Going on a field trip to the Solomon Islands for one of my courses confirmed that studying marine biology was the right choice. After finishing a long day of scuba diving and data collection, we were on the boat back to Kolombangara Island where we were being hosted. There was a beautiful sunset with seabirds soaring through the sky, a stingray jumped out of the water and I remember having this feeling of euphoria and my eyes welled up.

"Throughout my time at AUT, I met some amazing people who I have developed rich relationships with, and their passion really inspired me. I met some of my closest friends and the lecturers gradually became friends too. I was also one of the founding members of AUT's sustainability group, Future Proofers.

"I'm now applying my understanding of marine biology as an analyst for Fisheries New Zealand, which is part of the Ministry for Primary Industries. Inshore fisheries encompasses shellfish, freshwater, and finfish fisheries as well as other aquatic life. There's a lot of passion about New Zealand fisheries and the wider aquatic environment. It's incredibly fulfilling knowing that I'm contributing to the protection of our environment and resources."

Bachelor of Science
Marine Biology

With 71 percent of the Earth's surface covered by water, marine life is critical to our existence. It's one of the most valuable sources of food, medicine and raw materials. New discoveries are made daily in marine biology and ecology, making this an exciting and dynamic career choice with endless potential.

This major covers marine biology (the scientific study of organisms in the ocean) and marine ecology (how marine organisms interact with each other and the environment). You become familiar with a range of marine sciences, including the biology of fish and aquatic plants and marine invertebrates. Field trips are a key part of this major – you frequently go out on boats to investigate marine life or learn about aquaculture techniques, coastal processes, oceanography, management and conservation theories and practices.

What this major covers

Refer to page 14 for the courses you'll study each year.

Year 1

This year's courses give you a general scientific grounding and prepare you for more advanced courses in Year 2 and 3.

Year 2 & 3

You take advanced level courses related to marine biology and can choose from a wide range of science electives to make up the 360 points required to complete your degree.

Workplace experience

In your final year you can enrol in the Research Project course (30 points) if you have at least a B grade average in 60 points at level 6. This may involve working on an industry-related project related to your major. Companies or research organisations involved include NIWA, New Zealand Premium Whitebait, OceaNZ Blue.

Career opportunities

Aquaculture business owner, marine scientist or technologist, farm/hatchery manager, production supervisor, science teacher[1].

1. After completing a graduate diploma in education.

Bachelor of Science
Microbiology

Interested in how microorganisms interact with the environment? Want to know how to detect the microorganisms that cause diseases and spoilage? Want to be involved with industries that produce antibiotics, food and drinks, or alternative fuels? Microbiology is the study of living organisms and infectious agents that can't be seen by the naked eye.

The Microbiology major prepares you for careers in this interesting and dynamic field. You explore the role of microorganisms across many areas – human health, industry, agriculture and the environment. You develop the skills for careers in a wide variety of settings in industry, research or government organisations.

What this major covers

Refer to page 14 for the courses you'll study each year.

Year 1

This year's courses give you a general scientific grounding and prepare you for more advanced courses in Year 2 and 3.

Year 2 & 3

You take advanced level courses related to microbiology and can choose from a wide range of science electives to make up the 360 points required to complete your degree.

Workplace experience

In your final year you can enrol in the Research Project course (30 points) if you have at least a B grade average in 60 points at level 6. This may involve working on an industry-related project related to your major. Companies or research organisations involved include Drapac Co. (NZ), OceaNZ Blue, Sanitas NZ.

Career opportunities

Environmental microbiologist, food quality assurance scientist, food microbiologist, scientific laboratory technician, research scientist, technical brewer, science teacher[1].

1. After completing a graduate diploma in education.

Sarah McFarlane
Microbiologist, DB Breweries
Bachelor of Science in Microbiology

"My interest in microbiology started at a young age. My dad got me interested in homebrewing, and I soon discovered that I was really passionate about yeast and bacteria. It's fascinating how something so small can have a big impact on things.

"I initially started studying at another university but soon realised that the degree there was more medical-based, which I wasn't really interested in. I liked that AUT had close links with industry partners, and a strong focus on food science and the industrial application of microbiology.

"In my final year I undertook a research project to explore how different yeast affects beer. I enjoyed that I was able to research something I was passionate about and could apply the knowledge that I had learned throughout my degree.

"My role now is a mix of working in the lab and the brewery to ensure the quality of the beer DB Breweries produces. I love that I'm part of creating something that people enjoy drinking, and that there is always something new going on at work. I was able to transfer the tools I learned during my time at AUT into the working environment. The skills I developed throughout my studies have helped me identify problems and have given me the confidence to offer solutions."

Bachelor of Science
Molecular Genetics

Ever wondered why humans are so similar yet so different? Study molecular genetics at AUT to be part of the biotechnology revolution, and help develop new medicines and make agriculture more sustainable. Learn about the basic molecules of life and how they work, how we study them, and how they're being used to understand our world and to ensure our future health and environment.

Molecular genetics can open doors to a range of careers including medicine and drug development, research, agriculture, conservation management, policy development, product development, food science, microbiology and forensics.

What this major covers

Refer to page 14 for the courses you'll study each year.

Year 1

This year's courses give you a general scientific grounding and prepare you for more advanced courses in Year 2 and 3.

Year 2 & 3

You take advanced level courses related to molecular genetics and can choose from a wide range of science electives to make up the 360 points required to complete your degree.

Workplace experience

In your final year you can enrol in the Research Project course (30 points) if you have at least a B grade average in 60 points at level 6. This may involve working on an industry-related project related to your major.

Institutes and employer organisations involved include Plant and Food Research, Manaaki Whenua Landcare Research, AgResearch, Institute of Environmental Science and Research (ESR), SCION (Rotorua), MBIE, Environmental Protection Authority, Ministry for Primary Industries.

Career opportunities

Research scientist for government and private research institutes, or Non-Government Organisations (NGOs); scientist working for government departments and ministries or regional or city councils.

Bachelor of Science
Psychology

Want to understand people, and how they behave and think? The Psychology major in the Bachelor of Science prepares you for a career as a research scientist. You'll gain a better understanding of how people behave and think, which is a substantial advantage in today's workplaces, regardless of your career.

Modern psychology is theoretical and experimental in nature, and current knowledge is based on observable and repeatable behavioural data. This can include counts of behaviours in animals and humans, and verbal accounts about emotions. That's why the Psychology major includes practical work in laboratories or the field.

What this major covers

Refer to page 14 for the courses you'll study each year.

Year 1

This year's courses give you a general scientific grounding and prepare you for more advanced courses in Year 2 and 3.

Year 2 & 3

You take advanced level courses related to psychology and can choose from a wide range of science electives to make up the 360 points required to complete your degree.

Workplace experience

In your final year you can enrol in the Research Project course (30 points) if you have at least a B grade average in 60 points at level 6. This may involve working on an industry-related project related to your major. Institutes and employer organisations involved include airways, Auckland Council, Defence Technology Agency, Department of Conservation, Employment Relations Authority, Ministry of Transport, New Zealand Transport Agency, WorkSafe.

Career opportunities

Research scientist for private companies, and local and central government, including: airways, Auckland Council, Corrections Department New Zealand, Defence Technology Agency, Department of Conservation, Employment Relations Authority, Ministry of Transport, New Zealand Transport Agency, WorkSafe.

Sarah Slui
3rd-year student,
Bachelor of Science in Psychology

"Doing a Bachelor of Science was a no-brainer to me. I originally majored in biomedical science but soon discovered how many different options AUT provides in the School of Science. In my first year at AUT, one of our lecturers talked about neuropsychology and the development of the unconscious mind. As soon as I heard him discuss the effects of trauma on the development of the mind, blending neuroscience with psychoanalysis, I instantly knew this was what I wanted to research.

"My dream career would be research in neuropsychoanalysis where I can study the neurobiology of the unconscious. I'm particularly interested in developmental aspects and my plan is to continue into postgraduate study to lead me onto this path.

"I absolutely love learning new things and being curious, and the courses offered in the Bachelor of Science are so diverse and interesting. The staff have always been incredible, and the lecturers were invested in their students and helping them achieve their goals.

"For my third-year research project, I've looked into the relationship between perfectionism and procrastination, and if there are any differences between the student body and older adults in office workplaces. I'm really proud of completing this project and learning so much about academic research and writing, and the support from AUT staff has been unmatched."

Bachelor of Advanced Science (Honours) [BAdvSc(Hons) | AK2040] Overview

QUICK FACTS

Level:	8
Points:	480
Duration:	4 years F/T, equivalent P/T
Campus:	City
Starts:	28 Feb 2022

Claire Ellis
Doctor of Philosophy candidate
Bachelor of Advanced Science (Honours) with First Class Honours

"I chose to study at AUT after I went to a science talk at my high school where two lecturers spoke about AUT's intention to equip students with a lot of practical knowledge. I've really enjoyed the analytical side of science; the experiment design and analysis of data. My career goal is to be a researcher, finding new patterns in our environment and working towards a more sustainable future. For me, the Bachelor of Advanced Science (Honours) was the best route to achieve this goal because as part of this degree you conduct your own research. My honours research focused on the succession of two Auckland regional parks over a 10-year period, before pest proof fencing was added. For my PhD, I'll be looking at how drought and herbivory has affected tussock grassland composition over 40 years."

The new four-year (480 points) Bachelor of Advanced Science (Honours) is a response to the needs of high-performing students. It provides direct entry for selected students from high school into a postgraduate degree.

In the Bachelor of Advanced Science (Honours), you can study some second-year courses in your first year, some third-year courses in your second year and some postgraduate courses in your third year. The fourth year consists of postgraduate courses and a one-semester research project. High-performing students will be eligible for direct entry into a PhD.

Entry requirements

Minimum entry requirements

- Applicants must have completed one or more years in a Bachelor of Science with a B+ grade average; OR
- Achieved NCEA level 3 with at least 260 points (or 310 in CIE, or 33 in IB) in university approved subjects and at least 16 NCEA credits each in two subjects from: Biology, Chemistry, Earth and Space Science, Physics and Science, or equivalent CIE, or IB in university approved subjects

Specialisations

- Applied Conservation
- Biomedical Science
- Chemistry
- Environmental Science
- Food Science
- Geospatial Science
- Marine Science
- Microbiology
- Molecular Genetics

Applied Conservation

This specialisation focuses on identifying and solving conservation problems by working with communities. Courses cover socio-ecological systems and conservation planning, biology and ecology, as well as geographical information systems, which is proving to be an essential tool for conservation planning.

Biomedical Science

Develop the range of skills you'll need if you want to move into biomedical research in New Zealand and internationally. This specialisation is designed to reflect the current needs of the pharmaceutical/nutraceutical industry.

Chemistry

Courses in this specialisation cover the range of skills you'll need if you want to continue into chemistry research or start a career in industry either in New Zealand or around the world.

Environmental Science

Environmental science is a strong research area within AUT's School of Science. This specialisation includes courses in marine biology, terrestrial ecology, plant physiology and animal behaviour.

Food Science

Food science is particularly relevant for New Zealand, as food products make up the bulk value of our exports. AUT's School of Science has strong links to industries that provide students with research opportunities in the fields of food product development, food microbiology and food chemistry.

Geospatial Science

Geospatial science is another strong research area within the School of Science. We have pioneered high-resolution 3D mapping for conservation purposes using drones in Antarctica, Australia, Africa and New Zealand.

Marine Science

Explore marine sciences, including the biology of fish and aquatic plans and marine invertebrates. Courses cover oceanography, estuarine ecology, fisheries science and marine spatial planning.

Microbiology

Courses in this specialisation cover molecular microbiology, environmental microbiology, food microbiology, microbial biotechnology and viral plant pathology. We have a number of international collaborations in this field.

Molecular Genetics

This field of research has seen major technological advancements in recent years and offers ever-increasing career opportunities. Molecular genetics is a strong research area at AUT, and our students have access to state-of-the-art equipment.

What this qualification covers

You complete 480 points including the postgraduate research project (60 points) in which you gain skills in scientific research and in drafting a paper in a format suitable for a scientific journal publication. Refer to the course planner on page 34 for details.

Career opportunities

This degree prepares you for a wide range of careers in your chosen specialisation.

For more details visit **aut.ac.nz/sciences**

#1 IN NEW ZEALAND FOR **GLOBAL RESEARCH IMPACT**

Ellis Nimick
GIS Analyst, New Zealand Carbon Farming
Bachelor of Advanced Science (Honours) in Geospatial Information Systems

"While at AUT I met my wonderful partner, my closest mates, my own little tramping team, and even my lecturers and mentors gradually became good friends. The School of Science is a community of so many passionate people, and it's the best place to be if you want to share in those passions and interests. In my final year I also got to travel to a private pest-free island to help identify the native trees growing there, and a wild, confused Kiwi pecked my toe before running headfirst into a fence. Another highpoint for me was being awarded a summer scholarship, which involved working on a New Zealand-specific hyperspectral plant database for AUT. It was a really brilliant project, and not something I thought I'd ever get the opportunity to work on."

Course planner – Bachelor of Advanced Science (Honours)

The courses below are compulsory for each relevant specialisation. You'll need to take additional elective courses each year to bring the total number of points per year to 120. All courses are 15 points unless stated otherwise.

SPECIALISATIONS	LEVEL 5 (Year 1)	LEVEL 6 (Year 2 & 3)	LEVEL 7 (Year 2 & 3)	LEVEL 8 (Year 3 & 4)
Compulsory course for all specialisations				Dissertation (45 pts) OR Research Project (60 pts)
Applied Conservation	TWO OF: • Plants & Animals • Ecology & Evolution • Biological Sampling & Interpretation • Human Geography • Biodiversity • Our Dynamic Earth	Environmental Law Research Techniques Geographic Information Systems Biogeography Conservation Planning TWO OF: • Biology of Marine Organisms • Ecological Concepts I • Ecological Concepts II • Marine Invertebrates • Plant & Animal Taxonomy	Applied Conservation Ecological Management & Modelling Animal Behaviour & Ecology	FOUR OF: • International Conservation Biology • Applied New Zealand Conservation • Socio-ecological Systems Analysis • Global Change Biology • Geospatial Science for Conservation PLUS at least 1 other level 8 course
Biomedical Science	TWO OF: • Microbiology • Biological & Solution Chemistry • Biological Sampling & Interpretation • Principles of Chemistry	Biochemistry Cells, Genes & Molecules Analytical Chemistry Methods of Research & Enquiry Human Anatomy & Physiology II Principles of Genetics	Pharmacology for Professional Practice Biomedical Science Natural Compounds Biomedical Technology	Biomedical Science & Technology (30 pts) TWO OF: • Contemporary Molecular Genetics (30 pts) • Quality Assurance in Laboratory Services (30 pts) • Ethics of Biotechnology (30 pts) PLUS at least 1 other level 8 course
Chemistry	TWO OF: • Principles of Chemistry • Biological & Solution Chemistry • Biophysics	THREE OF: • Inorganic Chemistry • Analytical Chemistry • Thermodynamics and Chemical Kinetics • Biochemistry • Organic Chemistry	THREE OF: • Advanced Analytical Chemistry • Surfaces, Colloids & Nanotechnology • Advanced Inorganic Chemistry • Protein & Metabolic Chemistry • Organic Synthesis & Molecular Design	FOUR OF: • Physical Chemistry I • Chemistry for Drug Discovery • Biological Inorganic Chemistry I • Green & Sustainable Chemistry • Organic Chemistry II • Biological Inorganic Chemistry II • Molecular Spectroscopy
Environmental Science	TWO OF: • Plants & Animals • Ecology & Evolution • Biological Sampling & Interpretation • Principles of Chemistry	Environmental Risk Assessment Environmental Law Research Techniques Ecological Concepts I Ecological Concepts II	Plant Ecology Environmental Chemistry Ecological Management and Modelling	• Applications of GIS • Advanced Ecology • Macroecology & Biogeography • Marine Ecosystem Functions PLUS at least 1 other level 8 course
Food Science	TWO OF: • Principles of Chemistry • Food Science • Biological & Solution Chemistry • Biophysics • Microbiology • Biological Sampling & Interpretation	Analytical Chemistry Food Microbiology Food Process Engineering Food Technology Food Chemistry	Advanced Food Microbiology Advanced Food Chemistry Sensory Evaluation	60 POINTS FROM[1]: • Food Science • Frontiers of Food Microbiology • Recent Trends in Food Science • Current Topics in Food Science • Advanced Sensory Analysis of Food • Food Product Development PLUS at least 1 other level 8 course

SPECIALISATIONS	LEVEL 5 (Year 1)	LEVEL 6 (Year 2 & 3)	LEVEL 7 (Year 2 & 3)	LEVEL 8 (Year 3 & 4)
Geospatial Science	TWO OF: • Plants & Animals OR Biodiversity • Ecology & Evolution • Biological Sampling & Interpretation • Our Dynamic Earth OR Human Geography	Environmental Law Research Techniques Geographic Information Systems Biogeography Geology Landscape & Environment	Geospatial Analysis Remote Sensing Ecological Management and Modelling	60 POINTS FROM[1]: • Applications of GIS • Advanced Applications in GIS • GIS Programming • Geospatial Internship PLUS at least 1 other level 8 course
Marine Science	• Biological Sampling & Interpretation • Plants & Animals • Ecology & Evolution	• Biology of Marine Organisms • Marine Invertebrates • Environmental Law • Research Techniques	• Ecological Management & Modelling • Oceanography • Estuarine Ecology	• Advanced Biological Oceanography • Fisheries Science • Marine Ecosystems Functions • Marine Spatial Planning AND ONE OF: • Quantitative Analysis • Advanced Statistical Modelling
Microbiology	TWO OF: • Principles of Chemistry • Microbiology • Biological & Solution Chemistry • Ecology & Evolution	Environmental Microbiology Food Microbiology Biochemistry Industrial Microbiology Principles of Genetics Cells, Genes & Molecules	Advanced Food Microbiology Biotechnology Molecular Genetics	60 POINTS FROM[1]: • Frontiers of Food Microbiology • Selected Topics in Microbiology • Contemporary Molecular Genetics PLUS at least 1 other level 8 course
Molecular Genetics	TWO OF: • Biological Sampling & Interpretation • Principles of Chemistry • Biological & Solution Chemistry • Microbiology	Biochemistry Principles of Genetics Cells, Genes & Molecules Research Techniques	45 POINTS FROM: • Molecular Genetics • Molecular Diagnostics • Computational Genetics • Microbial Genetics • Protein & Metabolic Chemistry	60 POINTS FROM[1]: • Contemporary Molecular Genetics • Bioinformatics • Ethics of Biotechnology • Specialist Readings PLUS at least 1 other level 8 course

1. Not all courses listed are 15 points. Refer to the AUT Calendar, **aut.ac.nz/calendar**

Bachelor of Medical Laboratory Science [BMLS | AK3432] Overview

QUICK FACTS

Level:	7
Points:	480
Duration:	4 years F/T, equivalent P/T
Campus:	City
Starts:	28 Feb 2022

Krupa Lumbhani
Medical Laboratory Scientist, LabPLUS
Bachelor of Medical Laboratory Science

"It was my dream to work in a lab as a scientist and the Bachelor of Medical Laboratory Science gave me this opportunity. I had previously completed a microbiology degree in India, and came to AUT after a long break of more than ten years. I decided to study at AUT after finding very good reviews about AUT online, and getting recommendations from my family and friends. I think I made a very good decision. My role now involves processing specimens, registering specimens, and reading the results for blood samples, sexually transmitted diseases, enteric pathogens, respiratory samples, urine infections, sterile site infections and antibiotic susceptibility. In this current pandemic, my role also includes doing molecular testing for COVID-19. Being able to help the community as much as I can is a very nice feeling."

Medical laboratory scientists play a key role in health science. They provide information about a patient's health vital to the diagnosis and treatment of disease. The Bachelor of Medical Laboratory Science prepares you for a career in this exciting field. You develop skills in accurate observation and the collection, recording and interpretation of test results. Study with us and you have access to state-of-the-art equipment, including the latest automated analysers in clinical chemistry, molecular diagnostics, immunology and haematology in the AUT Roche Diagnostics Laboratory, the first of its kind in New Zealand. Your study includes workplace experience where you can apply what you have learnt in the classroom. Once you have completed this degree and fulfilled the requirements of the Medical Sciences Council of New Zealand, you can register and practise as a medical laboratory scientist.

Entry requirements

Minimum entry requirements

University Entrance or equivalent including:

- **NCEA:** 14 or more credits in each of Biology, Chemistry and Statistics
- **CIE:** A D grade or better at AS or A level in each of Biology, Chemistry and Statistics

Must be capable of meeting Health Practitioners Competence Assurance Act (HPCA Act) requirements including police clearance.

English language requirements

At least IELTS (Academic) 6.5 overall with all bands 6.0 or higher; or equivalent.

Required New Zealand school subjects

Biology, Chemistry, one of Calculus, Mathematics or Statistics.

Don't meet the entry requirements?

Consider starting with our Certificate in Applied Science or the Biomedical Science major in the Bachelor of Science.

What this qualification covers

Year 1

In your first year you take eight compulsory courses. These courses give you a general scientific grounding and a broader perspective on medical laboratory science.

Courses you take this year:

- Knowledge, Enquiry and Communication
- Biological and Solution Chemistry
- Human Anatomy and Physiology I
- Human Anatomy and Physiology II
- Microbiology
- Biological Sampling and Interpretation
- Principles of Chemistry
- Histology and Cytology

Year 2

Your second-year courses cover biochemistry, genetics, clinical chemistry, haematology, medical microbiology, immunology and virology, transfusion science and molecular genetics.

Year 3

You study two medical laboratory science specialisation subjects in more depth, along with pathology, methods of research and professional practice and ethics. Specialisations can be chosen from Clinical Chemistry, Haematology, Histology, Immunology, Molecular Genetics, Medical Microbiology, and Transfusion Science (not all are offered every year).

Year 4 (workplace experience)

Your final year consists of two 15-week placements of 30 hours per week in IANZ accredited medical testing laboratories in New Zealand or Australia.

Career opportunities

This degree prepares you for a career in a diagnostic laboratory. Registered medical laboratory scientists work in public hospitals and community laboratories doing diagnostic laboratory testing across all specialisations.

Other career paths include:

- Diagnostic reagent manufacture
- Laboratory management
- Marketing of medical equipment and reagents

AUT encourages early application. Places are limited[1].

1. We encourage you to apply as soon as applications are open. Places are limited, and in many programmes there are more applications than available places. Once we have received your application, we may ask you to provide further information. Your application can only be assessed when you have provided all of the information requested.

For more details visit **aut.ac.nz/sciences**

Our science students have access to the latest technology and labs

Kayla Gray
Medical Laboratory Scientist, LabPLUS
Bachelor of Medical Laboratory Science

"Medical laboratory science involves the analysis of samples from patients within the hospital and in the community. Approximately 70% of the decisions about a patient's diagnosis are based on the interpretation of tests performed by medical laboratory scientists, so we're able to make a huge difference behind the scenes. I'm currently employed in the antenatal Down syndrome screening department. This involves screening pregnant women for the possibility of having a child with chromosomal abnormalities. This is done by analysing the measurements of certain analytes in the maternal serum and combining these with nuchal translucency ultrasound measurements to calculate the overall risk of a child with chromosomal abnormalities. The theory and practical experience I gained as part of my AUT degree are the backbone of my job. It's interesting to link together everything you've learnt and interpret test results to see what's really going on with the patient."

Course planner – Bachelor of Medical Laboratory Science

YEAR	SEMESTER 1	SEMESTER 2
1 120 points	Knowledge, Enquiry and Communication	Biological and Solution Chemistry
	Human Anatomy and Physiology I	Human Anatomy and Physiology II
	Microbiology	Biological Sampling and Interpretation
	Principles of Chemistry	Histology and Cytology
2 120 points	Cells, Genes & Molecules	Clinical Chemistry I
	Medical Microbiology I	Haematology I
	Immunology and Virology	Transfusion Science I
	Principles of Genetics	Molecular Genetics
3 120 points	Pathology I	Pathology II
	Professional Practice and Ethics	Laboratory Information Systems & Automations
	PLUS CHOOSE 2 SPECIALISING AREAS (30 points per area made up of 2 courses)	
	Clinical Chemistry	
	Haematology	
	Histology	
	Immunology	
	Molecular Genetics	
	Medical Microbiology	
	Transfusion Science	
4 120 points	Two clinical placements in specialising subjects (each placement is 60 points)	

480 points total

Certificate in Applied Science

CertAppSc | AK1018

Interested in science but not quite ready to start the Bachelor of Science or not sure which direction to take? The Certificate in Applied Science gives you a taste of the many options in AUT's School of Science. It's designed to help you develop the academic and study skills for study at bachelor's degree level.

Entry requirements

Minimum entry requirements

- Completion of Year 12 or equivalent
- At least 12 credits at level 2 in one subject from Biology, Chemistry, Earth and Space Science, Physics, Science; AND
- At least 12 credits at level 2 from one or more subjects from Art History, Business Studies, Calculus, Classical Studies, Drama, Economics, English, Geography, Health Education, History, Media Studies, Physical Education, Social Studies, Te Reo Māori, Te Reo Rangatira, Mathematics or Statistics

English language requirements

At least IELTS (Academic) of 5.5 overall with all bands 5 or higher; or equivalent.

What this qualification covers

You choose eight papers from the following options[1]:

- Applied Statistics
- Ecology and Evolution
- Foundation Algebra
- Foundation Biology
- Foundation Biophysics
- Foundation Chemistry
- Foundation Ecology
- Foundation Human Anatomy and Physiology
- Foundation Statistics
- Foundation Mathematics
- Human Anatomy and Physiology I
- Health and Environment OR Hauora Māori
- Introduction to Academic Writing
- Introduction to Human Development
- Introduction to Human Structure and Function
- Introduction to Professional Development
- Lifespan Development and Communication
- Plants and Animals
- Principles of Chemistry
- Society and Health

Career opportunities

This certificate prepares you for the Bachelor of Science and entry-level positions in science-related industries.

1. This course must be approved by the programme leader. Prerequisites may apply. Not all of these courses are available in both semesters.

For more details visit **aut.ac.nz/sciences**

QUICK FACTS

Level:	4
Points:	120
Duration:	1 year F/T, up to 2 years P/T
Campus:	City
Starts:	28 Feb & 18 July 2022

Saraya-Grace Hogan
Ngāti Hako
3rd-year student, Bachelor of Medical Laboratory Science
Certificate in Applied Science

"Scientists play a huge role in medical diagnosis. I remember sitting in a lecture with my pathology lecturer, and he explained that without scientists in the medical field every diagnosis would be a guess. Us scientists running one test could turn a guess into a certainty. The variety of courses offered at AUT is amazing and the lecturers who deliver them are even better. The class sizes are small, so you can receive help and ask questions, and be more than a number. At AUT, I've been given the chance to attend a special interest group on molecular diagnostics, toured one of the top genetics labs in New Zealand, and attended a presentation from a senior staff member from Roche Diagnostics as well as a lecture by a Nobel prize winner."

QUICK FACTS

Level:	4
Points:	120
Duration:	1 year F/T, P/T available[1]
Campus:	City & South
Starts:	28 Feb & 18 July 2022

Certificate in Science and Technology

CertScT | AK1311

The one-year Certificate in Science and Technology gives you an introduction to the main areas involved in computer or mathematical sciences. Courses cover mathematics, programming, physics, statistics, engineering science and academic literacy. It's a great pathway to gain a taste of university life and develop the knowledge and study skills for further study at bachelor's level.

Entry requirements

Minimum entry requirements

- Completion of Year 12
- **NCEA:** 48 level 2 credits or higher, plus eight level 1 credits in at least one subject from Art History, Business Studies, Classical Studies, Drama, Economics, English, Geography, Health Education, History, Media Studies, Physical Education, Social Studies, Te Re Māori or Te Reo Rangatira
- **CIE:** 60 points on the UCAS Tariff

English language requirements

IELTS (Academic) 5.5 overall with all bands 5.0 or higher; or equivalent.

What this qualification covers

- Academic Literacies (compulsory course for all students)

Plus select seven courses from:

- Foundation Algebra
- Foundation Calculus
- Foundation Design Principles
- Foundation Design Technologies
- Foundation Mathematics
- Foundation Mathematics and Design
- Foundation Physics A
- Foundation Physics B
- Foundation Problem Solving
- Foundation Programming
- Foundation Statistics
- Introduction to Engineering
- Tertiary English and Critical Thinking

Further study

Students who complete this programme successfully can apply for bachelor's degrees in computer and mathematical sciences.

AUT encourages early application. Places are limited.

1. Part-time option is available to domestic students at the discretion of the programme leader.

For more details visit **aut.ac.nz/sciences**

Diploma in Applied Science

DipAppSc | AK3750

The Diploma in Applied Science is for students who want to gain knowledge in a specialised scientific discipline or are preparing to apply for chiropractic study.

There are two pathways: Standard diploma and Pre-Chiropractic.

Entry requirements

Minimum entry requirements

- Completion of Year 12
- **NCEA:** 48 level 2 credits including eight level 2 credits in any one subject from Biology, Chemistry, Earth and Space Science, Physics, Science
- **CIE:** 60 points on the UCAS Tariff, including any one subject similar to the NCEA subjects listed above

Pre-Chiropractic: Letter of Intention to NZCC from the New Zealand College of Chiropractic.

English language requirements IELTS

(Academic) 5.5 overall with all bands 5.0 or higher; or equivalent.

What this qualification covers

Standard diploma

This one-year diploma includes eight courses from Year 1 or 2 of the Bachelor of Science, including:

- Biological and Solution Chemistry
- Biological Sampling and Interpretation
- Biophysics
- Ecology and Evolution
- Plants and Animals
- Principles of Chemistry
- Health and Environment (or Hauora Māori)
- Knowledge, Enquiry and Communication
- Microbiology
- Human Geography

QUICK FACTS

Level:	5
Points:	120
Duration:	**Standard diploma:** 1 year F/T, P/T available **Pre-Chiropractic:** 1 year F/T
Campus:	City
Starts:	28 Feb & 18 July 2022

Nationally and internationally recognised lecturers

Diploma in Applied Science

continued

Pre-Chiropractic

This one-year diploma prepares you for the Bachelor of Chiropractic, taught through the New Zealand College of Chiropractic. You need to complete the AUT Diploma in Applied Science if you want to enrol with the college. Completing the diploma doesn't guarantee entry to the Bachelor of Chiropractic.

You study:

- Knowledge, Enquiry and Communication
- Biological and Solution Chemistry OR Introduction to Biochemistry
- Biophysics
- Human Anatomy and Physiology I
- Human Anatomy and Physiology II
- Microbiology
- Health & Environment OR Hauora Māori

You also choose one elective from the Bachelor of Science.

For more information regarding the Bachelor of Chiropractic please contact:

New Zealand College of Chiropractic
6 Harrison Road
Mt Wellington, Auckland
+64 9 526 6789

Career opportunities

Standard diploma

Graduates with this broad foundation in science are prepared for science and laboratory work in a variety of industries. Graduates can also progress to a higher level science qualification.

Pre-Chiropractic

A pathway to gain entry into chiropractic college and become a registered chiropractor.

AUT encourages early application. Places are limited[1].

1. We encourage you to apply as soon as applications are open. Places are limited, and in many programmes there are more applications than available places. Once we have received your application, we may ask you to provide further information. Your application can only be assessed when you have provided all of the information requested.

For more details visit **www.aut.ac.nz/sciences**

Graduate Diploma in Science

GradDipSc | AK1042

Graduate Certificate in Science

GradCertSc | AK1043

Already have a degree? Upskill or change direction in your science career with the Graduate Certificate or Graduate Diploma in Science. These qualifications are aimed at current industry practitioners, including medical laboratory technicians upskilling to become medical laboratory scientists, microbiologists changing direction to enter the aquaculture industry, or health degree graduates transferring to anaesthetic technology. They offer excellent preparation for postgraduate study in a science discipline in which you were not originally trained, for example in the Postgraduate Certificate in Science, Postgraduate Diploma in Science or Master of Science.

Entry requirements

- A bachelor's degree OR
- Relevant professional qualification or experience approved by the Dean (or representative) to be equivalent to a degree.

English language requirements

IELTS (Academic) 6.5 overall with all bands 6.0 or higher; or equivalent.

What these qualifications cover

You choose courses from the Bachelor of Science to make up a total of 60 points. At least 45 points must be at level 7.

Courses cover

- Analytics
- Applied conservation
- Applied mathematics
- Astronomy
- Biomedical science
- Chemistry
- Computer science
- Environmental sciences
- Food safety
- Food science
- Geoscience
- Geospatial science
- Health protection
- Marine biology
- Microbiology
- Molecular Genetics
- Psychology

AUT encourages early application. Places are limited[1].

1. We encourage you to apply as soon as applications are open. Places are limited, and in many programmes there are more applications than available places. Once we have received your application, we may ask you to provide further information. Your application can only be assessed when you have provided all of the information requested.

For more details visit **aut.ac.nz/sciences**

Graduate Diploma in Science

QUICK FACTS

Level:	7
Points:	120
Duration:	1 year F/T, 2 years P/T
Campus:	City
Starts:	28 Feb & 18 July 2022

Graduate Certificate in Science

QUICK FACTS

Level:	7
Points:	60
Duration:	½ year F/T, 1 year P/T
Campus:	City
Starts:	28 Feb & 18 July 2022

Overview of our postgraduate qualifications

Bachelor of Science (Honours) (120 points)

The 120-point Bachelor of Science (Honours) is aimed at high-achieving students in the Bachelor of Science who want to advance their skills and make their CV stand out. It can also serve as a pathway to advanced research at master's level or direct access into a PhD. You complete a research methods course, advanced courses as well as a supervised research project/dissertation.

Bachelor of Advanced Science (Honours) (480 points)

For more information about the Bachelor of Advanced Science (Honours) refer to page 32.

Postgraduate Certificate in Science and Postgraduate Diploma in Science

These qualifications equip students with advanced knowledge in science, with courses drawn from the Master of Science. The Postgraduate Certificate in Science takes one semester of full-time study, and the Postgraduate Diploma in Science takes one year of full-time study. Graduates of the Postgraduate Certificate in Science and Postgraduate Diploma in Science may be able to progress to further study in the Master of Science.

Master of Science (180 points)

In as little as one year, science graduates can gain advanced research skills and knowledge in one of: Applied Conservation, Biomedical Science, Chemistry, Environmental Science, Food Science, Geospatial Science, Marine Science, Microbiology or Molecular Genetics.

Master of Science (Research) (240 points)

The Master of Science takes two years of full-time study, and includes taught courses and a one-year supervised research thesis. Choose from: Applied Conservation, Biomedical Science, Chemistry, Environmental Science, Food Science, Geospatial Science, Marine Science, Microbiology or Molecular Genetics.

Postgraduate Certificate in Medical Laboratory Science and Postgraduate Diploma in Medical Laboratory Science

These coursework qualifications provide you with specialist skills in medical laboratory science. You can follow a management or specialised scientist pathway. The Postgraduate Certificate in Medical Laboratory Science takes six months of full-time study, and the postgraduate diploma takes one year of full-time study. Graduates may be able to progress to the Master of Medical Laboratory Science.

Master of Medical Laboratory Science

As a Master of Medical Laboratory Science graduate you have advanced knowledge and understanding of your chosen field of medical laboratory science. You can follow either a management or specialised scientist pathway. This programme takes two years of full-time study, and includes taught courses and a one-year supervised research thesis.

Master of Philosophy

The Master of Philosophy is a one-year research only master's degree. It gives you the opportunity to undertake a research project of an applied or professional nature. It can also serve as a pathway to more advanced research at doctoral level.

Doctor of Philosophy

The Doctor of Philosophy (PhD) is a thesis-based research degree that leads to advanced academic and theoretical knowledge in a specialist area. The programme enables you to make an original contribution to knowledge or understanding in your field. You work closely with a supervisor to prepare a thesis, which is then examined by independent experts applying contemporary international standards.

For more details visit **www.aut.ac.nz/sciences**

HOW TO APPLY

Below is the step-by-step guide to the applications process. For more information visit aut.ac.nz/apply

1

APPLY EARLY

Places are limited. Submit your application well before the semester starts.

APPLYING FOR 2022

- Semester 1
  – apply by 6 December 2021
- Semester 2
  – apply by 2 May 2022

2

COMPLETE THE APPLICATION FORM

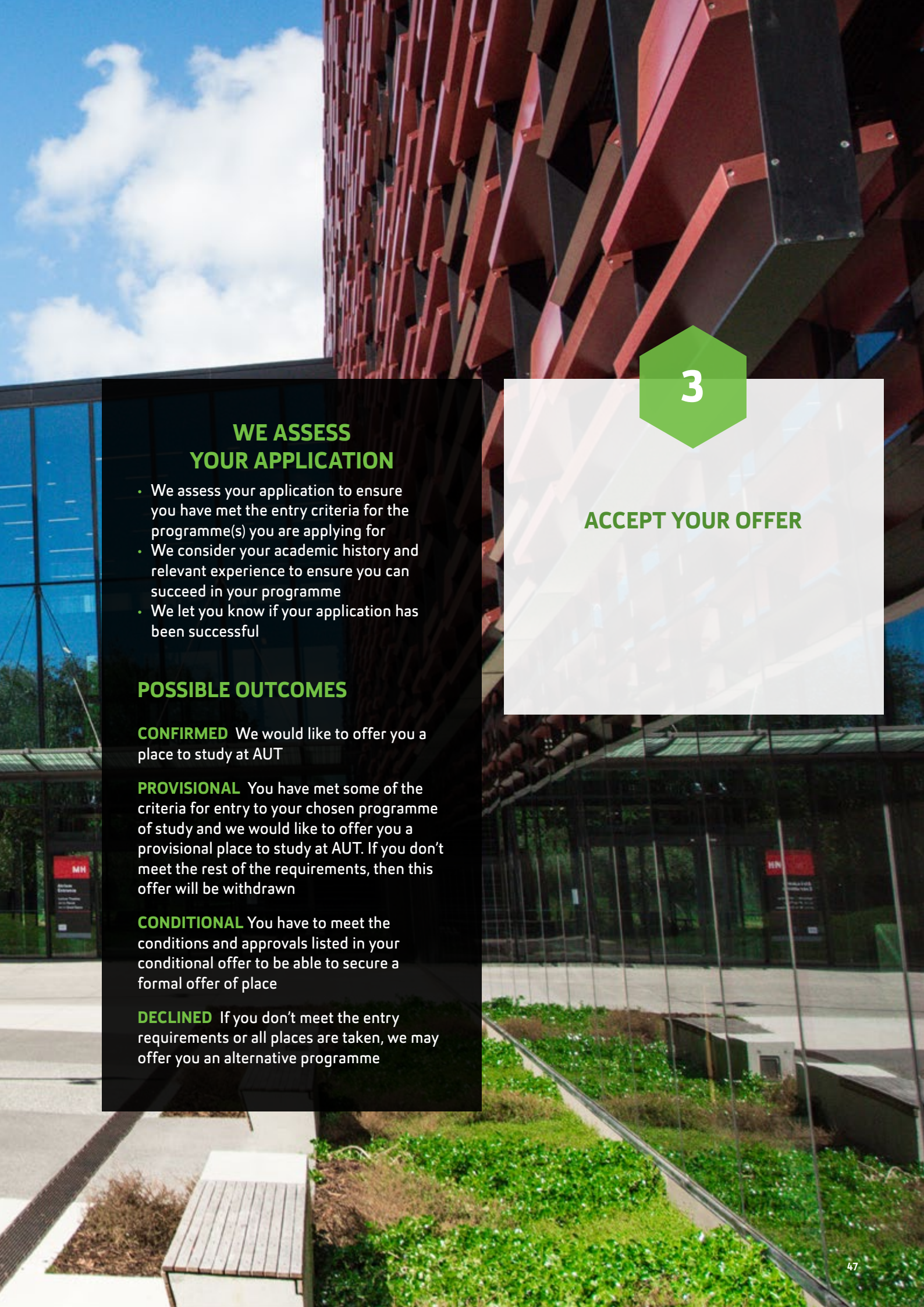
- Apply online
- Indicate your programme(s) of choice and major (if known)

International students can also apply using an AUT approved international agent. For a list of AUT registered agents visit **aut.ac.nz/international-agents**

SUBMIT YOUR APPLICATION

WE ACKNOWLEDGE YOUR APPLICATION

- We will send you an acknowledgment email, which explains how to check the status of your application
- We will contact you if we need more information



WE ASSESS YOUR APPLICATION

- We assess your application to ensure you have met the entry criteria for the programme(s) you are applying for
- We consider your academic history and relevant experience to ensure you can succeed in your programme
- We let you know if your application has been successful

POSSIBLE OUTCOMES

CONFIRMED We would like to offer you a place to study at AUT

PROVISIONAL You have met some of the criteria for entry to your chosen programme of study and we would like to offer you a provisional place to study at AUT. If you don't meet the rest of the requirements, then this offer will be withdrawn

CONDITIONAL You have to meet the conditions and approvals listed in your conditional offer to be able to secure a formal offer of place

DECLINED If you don't meet the entry requirements or all places are taken, we may offer you an alternative programme

3

ACCEPT YOUR OFFER

University admission to AUT bachelor's degrees

For New Zealand citizens and residents and international students studying in a high school in New Zealand

To gain admission to bachelor's degrees, you must have met the requirements for University Entrance plus any specified admission requirements for a programme, such as specific subjects, portfolios and interviews.

For more information on entry requirements, including entry requirements for international students, refer to the AUT Calendar or visit **aut.ac.nz/calendar**

Please note: AUT, like all other New Zealand universities, is required to manage enrolments. This is because of government policies that restrict the number of funded places available for domestic students in tertiary education.

Admission categories
You may be granted University Entrance under one of the following categories:

- NCEA University Entrance
- Ad Eundem Statum admission (at an equivalent level) – this includes Cambridge International Examinations (CIE) and International Baccalaureate Diploma Programme (IB)
- Discretionary Entrance
- Special Admission

Common University Entrance requirements

STANDARD	NCEA	CIE	IB[2]
Overall	Require **NCEA level 3** certificate which consists of 80 credits, including at least 60 credits at level 3 or higher. Can include up to 20 credits at level 2. **Note:** Credits to achieve NCEA level 3 may include unit standards from non-approved subjects. **Subject credits** Total of 42 level 3 credits including: • 14 credits from one approved subject • 14 credits from a second approved subject • 14 credits from a third approved subject	A minimum of 120 points on the UCAS Tariff[1] at A or AS level from an approved list (equivalent to NCEA approved subject list). Must include at least three subjects (excluding Thinking Skills) with grades D or above.	IB Diploma with minimum 24 points
Numeracy	At least 10 level 1 (or higher) numeracy credits (can be achieved through a range of subjects)	A minimum grade of D in IGCSE[3] mathematics or any mathematics subject at AS or A level.	Any mathematics subject – IB Group 5
Literacy	Total of 10 level 2 (or higher) literacy credits including: • 5 reading credits • 5 writing credits From specific standards in a range of NZQA English language rich subjects.	A minimum grade of E in English Language and/or English Literature subject at AS or A level.	Literature or language and literature (SL or HL) – IB Group 1, with English as the language.

1. UCAS (Universities and Colleges Admissions Services for the UK) Tariff = system which converts AS and A level grades into points.
2. New Zealand residents who have taken IB but have not been awarded the Diploma may apply for discretionary entrance.
3. IGCSE = International General Certificate of Secondary Education.

Where programmes require a specific subject, it is expected that a student will have achieved a minimum of 14 NCEA credits in that subject (or equivalent), unless indicated otherwise.

NCEA approved subjects

For a list of NCEA approved subjects for University Entrance visit the NZQA website, **nzqa.govt.nz**

AUT language rich subject list

Art History, Business Studies, Classical Studies, Drama, Economics, English, Geography, Health Education, History, Media Studies, Physical Education, Social Studies, Te Reo Māori, Te Reo Rangatira.

Discretionary Entrance

Discretionary Entrance is available to applicants who have attained a high level of achievement in Year 12 and want to undertake university study.

International students can't apply for Discretionary Entrance.

You can apply if you:

- Have not completed Year 13 in a New Zealand secondary school or have done Year 13 but not attempted to gain University Entrance
- Have not otherwise qualified for admission (or have attempted University Entrance)
- Are a domestic student (New Zealand or Australian citizen or permanent resident). If Australian, your most recent schooling must have been in New Zealand
- Are under 20 years of age on the first day of the semester in which you begin study and meet other requirements of the programme for which you apply

People who missed University Entrance in Year 13 may be considered for mid-year admission in the following year.

You can't apply for admission for Semester 1 if you studied in Year 13 after 1 June. However, you can apply for admission into Semester 2.

Minimum academic criteria for Discretionary Entrance

- NCEA level 2 certificate endorsed with minimum of Merit or CIE/IB equivalent
- Minimum of 14 credits in each of four NCEA level 2 (or higher) subjects, at least three of which must be on the approved subject list
- Meet UE literacy and numeracy standards, or their equivalent.

The application is a two-step process. First, you indicate you want to apply through Discretionary Entrance on the standard application form. If you meet the criteria you are sent a second form in which you provide further information and a school recommendation.

The recommendation will provide proof of your maturity, motivation, capability and readiness to undertake degree-level study and also verify that you were not enrolled in Year 13 beyond 1 June in the year prior to admission. Please refer to the AUT Calendar or visit **aut.ac.nz/calendar**

Please note: Applicants are considered on a case-by-case basis and must also meet other selection criteria for the programme for which they have applied. There is a non-refundable assessment fee of $50.00.

Admission at equivalent level (Ad Eundem Statum)

An applicant will be considered for Ad Eundem Statum admission if they:

- Have successfully gained University Entrance through CIE or IB or an approved qualification from a New Zealand secondary school of special character
- Have successfully completed a recognised foundation programme or other recognised tertiary qualification/ study of at least 120 points at level 3, or at least 60 points at level 4 in one course of study and have completed Year 13 at a NZ secondary school, or equivalent.
- Have qualifications from an overseas secondary school or tertiary institution deemed by AUT to be sufficient for entry into an undergraduate degree programme.

Please note: Applicants will be required to supply an official academic transcript with their application.

Bursary

If you sat Bursary (prior to 2004) rather than NCEA please refer to the AUT Calendar or visit **aut.ac.nz/calendar**

Special Admission

New Zealand citizens or residents who are over 20 years of age on or before the first day of semester can apply for degree-level entry through Special Admission.

English language requirements

If you don't have English as your first language, you may have to show evidence of your English language skills.

International students studying at secondary school and applying for University Entrance must achieve UE Literacy through New Zealand secondary school qualifications NCEA, CIE or IB. IELTS can't be substituted.

In all other cases another form of English language testing is required. Minimum IELTS requirements for each programme are included on the relevant pages in this publication. For other recognised English tests and more information, visit **aut.ac.nz/englishrequirements**

International students

Contact us for information regarding studying at AUT if you're not a citizen or permanent resident of New Zealand or Australia, or a citizen of the Cook Islands, Niue or Tokelau islands.

Visit **aut.ac.nz** for entry requirements for specific countries.

If you have any questions, you can contact us at **aut.ac.nz/enquire**

Fees & scholarships

Cost is an important factor when thinking about university study. This page gives you an idea of the approximate tuition fees at AUT, and different options to help you fund your education including scholarships, student loans and allowances.

To give you an idea of approximate costs, the 2021 tuition fees are shown below (based on full-time study and completing 120 points per year). All fees are in NZ dollars and include GST. The 2022 tuition fees will be advertised on **aut.ac.nz/fees** as soon as they have been set.

Domestic student tuition fees

First-time domestic students are entitled to one year of fees free.

Undergraduate programmes

Fee (per year)	**$3,393.00-$7,353.00**[1,2]

Bachelor of Advanced Science (Honours)

Fee (per year)	**$8,807.00**

1. This fees range includes 60-point (one-semester) programmes.
2. Part-time students pay a proportion of the fee based on the number of academic points they are studying.

International student tuition fees

Undergraduate programmes

Fee (per year)	**$17,722.00-$38,819.00**[1]

Bachelor of Advanced Science (Honours)

Fee (per year)	**Approximately $38,002.00**

1. This fees range includes 60-point (one-semester) programmes.

Other fees you may have to pay:

- 2021 Compulsory Student Services Fee – $790.40 for 120 points or $6.59 per academic point
- 2021 Building Levy – $77.52 for 120 points or $0.65 per academic point
- Additional fees for course materials or elective courses (check with your faculty if there are additional fees for your programme)

Please note that you have to pay your fees in full by the date specified on your fees invoice.

To find out more about fees call **+64 9 921 9779** or **0800 AUT AUT** (0800 288 288).

Free fees for your university study

New government policy means that eligible domestic students starting tertiary education receive one year of full-time study fees-free[1].

To check if you're eligible for fees-free study in 2022 visit **aut.ac.nz/fees**

1. Domestic students only, not available to international students.

Scholarships and awards

Scholarships and awards are a great way to fund your university study. There is a wide range of scholarships and awards available to AUT students at all stages of their study. Visit the scholarships website for a current list of scholarships offered by AUT and external funders, as well as application forms and closing dates. You can also contact AUT's Scholarships Office for advice on scholarships, awards and the scholarship application process.

To find out more call **+64 9 921 9837** or visit **aut.ac.nz/scholarships**

Support for scholarship students

Undergraduate scholarship students – whether the scholarship was awarded for academic endeavour or for excellence in sports, culture or leadership – have access to an extensive programme of support, including professional development and networking opportunities, and one-on-one support.

Student loans and allowances[1]

If you are a full-time domestic student, you may qualify for a student loan or allowance. Student loans and allowances are administered and paid by StudyLink. The application process can take some time, so it's a good idea to apply early. You can apply for a student loan or student allowance before your enrolment at AUT is complete.

To find out more call **0800 88 99 00** or visit **studylink.govt.nz**

1. For domestic students only

Help with planning and budgeting

We know that sometimes things happen and financial stress can impact your academic success. That's why we offer financial support that ranges from offering grocery or fuel vouchers, to helping with that unexpected bill.

StudyLink website

Visit **studylink.govt.nz** for tools, tips and information to help you plan and understand the costs you will have while studying.

Find out more

AUT open day

Our open day at the City Campus will showcase everything AUT has to offer to help you make an educated decision about university study. To find out more visit **aut.ac.nz/live**

Visit our website

For the latest information on AUT programmes and to keep up-to-date with what's happening at AUT visit **aut.ac.nz**

Contact us online

If you have any questions about studying at AUT, you can contact us at **aut.ac.nz/enquire**

Secondary schools

If you are a secondary school teacher or career advisor, our Future Students Team can help you with any questions you may have. Contact the team on **secondary.schools@aut.ac.nz**

Connect with us

AUT has a range of social media channels to keep our students and the general public aware of what is going on around the university.

Connect with us now:

@FutureStudentsofAUT

Need some guidance?

If you're still unsure what to do, or would like to check out the campus and facilities, you can contact our Future Students Team. Email **future@aut.ac.nz** or call **0800 AUT AUT** (0800 288 288) to speak to one of our friendly advisors.

Drop in and see us

AUT Student Hub

City Campus
Level 2, ground entry, WA building, 55 Wellesley Street East, Auckland

North Campus
AS building, 90 Akoranga Drive, Northcote, Auckland

South Campus
MB building, 640 Great South Road, Manukau, Auckland

Campus map

Key

- Student Hub
- Student lounge & study space
- Café
- Library
- Early Childhood Centre
- Gym
- Conference facility
- Intercampus shuttle bus stop
- Breast feeding and baby change room
- Mobility parks
- Defibrillator

City Campus

55 Wellesley Street East
Auckland Central

SCIENCE

UNDERGRADUATE PROGRAMME GUIDE 2022

0800 AUT AUT (0800 288 288)
Auckland University of Technology
Auckland, New Zealand
aut.ac.nz

Enquire now
aut.ac.nz/enquire

CITY CAMPUS
55 Wellesley Street East, Auckland Central

NORTH CAMPUS
90 Akoranga Drive, Northcote, Auckland

SOUTH CAMPUS
640 Great South Road, Manukau, Auckland

Connect with us now:

@FutureStudentsofAUT

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